

AUTHOR INDEX

A

- Abbady, A. M. E., see El-Abbady, A. M.
 Abbattista, F., 10
 Abbott, R. C., 463
 Abe, H., 443
 Abe, T., 359, 363, 369
 Abernethy, L., 420
 Abragam, A., 449
 Abraham, M., 445
 Abraham, R. J., 161, 306, 313, 314, 392, 442, 443, 446, 447
 Abrahams, S. C., 46
 Abrahamson, E. W., 366
 Accardo, C. A., 459
 Achenza, F., 254
 Ackerman, T., 8, 251, 259
 Ackermann, R. J., 10, 238
 Adam, F. C., 354, 436, 438, 439
 Adam, N. K., 92
 Adams, G. E., 300
 Adams, M., 439
 Adams, R. G., 366
 Addamiano, A., 470
 Addison, C. C., 9, 238, 355
 Adicoff, A., 316
 Adkins, H., 104
 Adrian, F. J., 363
 Afanasyev, V. A., 79
 Agar, J. N., 265
 Agarwal, B. K., 94
 Aggan, A. M. E., see El-Aggan, A. M.
 Ahmann, D. H., 225
 Ahrlund, S., 256, 350
 Ahsan, S. M., 361
 Ainsworth, J., 37
 Åkerlöf, G. C., 258
 Akin, G. A., 467
 Akishin, P. A., 43, 44, 236, 355, 467
 Akutin, M. S., 116, 117
 Alberty, R. A., 264
 Albrecht, A. C., 356
 Albrecht, W. M., 224, 464
 Alcock, C. B., 225
 Alden, T., 227
 Alder, B. J., 274
 Aldrich, P., 447
 Alegrie, R., 459
 Aleskovskii, V. B., 125
 Alexander, C. A., 234, 238, 466
 Alexander, L., 227
 Alexander, P., 307, 314
 Alexander, W. A., 223
 Alexandrov, V. V., 258
 Alger, R. S., 161
 Ali, M. A., 357
 Alieva, F. Z., 458
 Alimarin, I. P., 369
 Allais, E., 450
 Allan, J., 420
 Allan, Z. J., 358
 Allawala, N. A., 363
 Allen, A. O., 293, 294, 301, 321, 426
 Allen, H. C., 32, 44, 353
 Allen, N. L., 461
 Allen, P. E. M., 113, 115, 319
 Allen, P. W., 31, 390
 Allibone, T. E., 461
 Allin, E. J., 397
 Allinger, J., 170
 Allinger, N. L., 170
 Allison, M. F. L., 177
 Almenningen, A., 33, 34, 36, 39, 43, 353
 Alonso, J. I. F., see Fernandez Alonso, J. I.
 Altman, A., 15
 Altschuler, A. P., 8, 9, 10, 259, 355
 Amako, Y., 363, 369
 Amberg, C. H., 78
 Amden, I., 8
 Amdur, I., 469
 Amelincx, S., 415, 422
 Ameniya, A., 307, 308
 Ames, S. L., 224
 Amirkhanov, Kh. I., 8
 Amls, E. S., 263
 Amma, E. L., 45
 Amma, M. K. P., 355, 362
 Amphlett, C. B., 78, 124, 125, 126
 Anbar, M., 448
 Andelman, J. B., 17
 Anderko, K. P., 226
 Andersen, A. L., see Lindegaard-Andersen, A.
 Andersen, J. R., see Rastrup-Andersen, J.
 Anderson, C., 81
 Anderson, D. H., 342
 Anderson, I. C., 361, 367
 Anderson, J. H., 352
 Anderson, L. C., 301, 302, 316
 Anderson, L. W., 447
 Anderson, P. D., 9, 470
 Anderson, P. O., 219
 Anderson, R. S., 161
 Anderson, T. H., 161
 Anderson, W. F., 59
 Andersson, S., 232
 Andon, R. J. L., 12, 15, 16, 17, 18
 Andreevskii, D. N., 12, 18
 Andresen, A. F., 232
 Andrew, E. R., 448
 Andrew, K. F., 424, 464
 Andrews, A. I., 232
 Andrews, L. J., 15, 18
 Andrisano, R., 355
 Andrusow, L., 264
 Anfinson, C. B., 192, 211, 212
 Ang, K.-P., 15, 253
 Angier, D. J., 108, 116, 318
 Anno, T., 358, 359
 Anokhin, V. L., 136
 Anson, P. C., 60
 Antar, M. F., 357
 Antikainen, P. J., 8, 9
 Aoki, K., 206
 Applequist, J., 196
 Arai, S., 302, 344
 Aral, T., 93, 344
 Aranoff, S., 82
 Arcoria, A., 357
 Ard, W. B., 161
 Arditi, M., 446
 Ardon, M., 368
 Argent, B. B., 277
 Arkharov, V. I., 464
 Armstrong, G. T., 5, 9
 Armstrong, S. H., 206
 Armstrong, W. A., 321
 Arnell, J. C., 78
 Arnlm, E. von, 306
 Arnold, J. R., 351
 Arnold, R. T., 363
 Arnold, S. M., 463
 Arnold, V. W., 281
 Arnoldi, G., 411
 Arnott, C., 65, 365
 Aronson, S., 221
 Arsen'eva, R. V., 460
 Arslambekov, V. A., 90, 464
 Artandi, C., 322
 Artmann, K., 351
 Asahara, Z., 468
 Åsbrink, S., 232
 Asch, G., 445
 Ashinuma, K. I., 92
 Ashley, B. D., 361
 Ashmore, P. G., 64
 Aÿperger, S., 175
 Assarsson, G. O., 233
 Assarsson, L. O., 173

Assony, S. J., 357
 Aston, J. G., 12, 13, 38,
 39, 81
 Atherton, N. M., 161, 442,
 443
 Atkins, D. F., 230
 Atkinson, H. H., 415
 Atlas, L. M., 230
 Atoji, M., 402
 Attree, R. W., 3
 Auer-Welsbach, H., 227
 Auskern, A. E., 419
 Ausloos, P., 65, 302
 Austerwell, V. G., 126,
 139
 Austin, A. E., 229, 467
 Austin, D. E. G., 442,
 443
 Averbach, B. L., 220, 227
 Aveston, J., 130, 137
 Avgul, N. N., 80, 81
 Avrillon, R., 86
 Awano, M., 458
 Ayers, J., 211
 Azari, P. R., 138

B

Baba, H., 360
 Babb, S. E., Jr., 281, 356,
 363
 Babbitt, J. D., 92
 Baberkin, A. S., 303
 Babicky, A., 298
 Bacarella, A. L., 258
 Bach, N. A., 301
 Baciocchi, E., 358
 Back, E., 11, 13, 15, 16
 Back, R. A., 63, 64
 Bäcklin, K., 14
 Bäckstrom, H. L. J., 365,
 366
 Baddeley, G., 170
 Badger, G. M., 363
 Baeder, D. L., 291
 Bagdasaryan, Kh. S., 300
 Bagguley, D. M. S., 443
 Bahr, C., 127
 Bailey, D. M., 228
 Bain, T., 312
 Baird, J. C., 439, 447
 Bak, B., 33, 34, 35, 358
 Baker, A. W., 363
 Baker, G. S., 416
 Baker, J. M., 444, 445
 Baker, M. C., 207
 Baker, W. O., 106
 Balandin, A. A., 17, 84
 Balazs, E. A., 297
 Baldeschwieler, J. D., 393
 Bale, W. D., 256
 Balescu, R., 280
 Ballah, V., 14, 15, 16, 355,
 357, 367
 Balk, P., 362
 Ballantine, D., 426
 Ballantine, D. S., 108

Ballhausen, C. J., 349,
 350, 446
 Ballman, A. A., 468
 Balluffi, R. W., 420, 425
 Bamford, C., 177
 Bamford, C. H., 103, 114,
 117
 Bán, M. I., 354
 Banbury, P. C., 93
 Banda, J. F. G. de la, see
 García de la Banda, J. F.
 Banerjee, B., 369
 Banerjee, S. N., 256
 Banks, E., 231
 Bar, F., 354, 359
 Baranowski, B., 250
 Baranskil, K. N., 410
 Barb, W. G., 103
 Barcroft, J., 6
 Bardeen, J., 409
 Bardolle, J., 420, 464
 Bardwell, D. C., 290
 Bareiko, E. V., 302
 Barghusen, J., 136
 Barker, E. F., 32
 Barnatt, S., 464
 Barnes, G. A., 93
 Barnes, R. S., 416
 Barnett, M. P., 343
 Barrer, R. M., 78, 80, 81,
 125
 Barrett, A. H., 34, 35,
 405
 Barriol, J., 355
 Barrow, G. M., 351
 Barrow, R. F., 9, 10, 11,
 236, 238, 463, 465
 Bartell, F. E., 81
 Bartell, L. S., 32, 44, 353
 Bartlett, J. T., 415
 Bartlett, P. D., 112, 177
 Barton, C. J., 234
 Barton, D. H. R., 184,
 185
 Barton, R. J., 237
 Bartsch, C. A., 458
 Bascombe, K. N., 253
 Basford, P., 81
 Basmajian, J. A., 231
 Bass, A. M., 146, 148,
 151, 154, 155, 156, 159,
 161, 362, 395
 Bassett, G. A., 421
 Bastiansen, O., 31-47; 33,
 34, 36, 39, 43, 353, 355
 Bastick, J., 84, 91
 Basu, S., 353, 369
 Bate, R. T., 413
 Batta, I., 86
 Battino, R., 281
 Battiste, M., 171
 Bauder, A., 14
 Bauer, A. A., 229
 Bauer, E., 463
 Bauer, S. H., 10, 11, 60,
 461, 465
 Bauer, S. W., 368

Bauer, T., 162
 Baughan, E. C., 260, 261
 Baughman, G., 8, 258
 Bauman, R., 312
 Bauman, R. P., 352
 Baumann, G., 469
 Baur, G. S., 464
 Baur, J. F., 464
 Baxendale, J. H., 5, 292,
 293, 295, 300, 315
 Bayles, J. W., 172, 261
 Baynam, A. C., 415
 Bayzer, H., 355, 358
 Bazire, G. C., see Cohen-
 Bazire, G.
 Bazire, G.
 Bazley, N. W., 396, 459
 Beachell, H. C., 60
 Beamish, F. E., 137
 Beard, J. A. T., 358
 Bearman, R. J., 282
 Bease, A. E., 136
 Beattie, I. R., 133
 Beaty, E. C., 446
 Beaven, G. H., 212
 Becher, J. J., 79
 Beck, C. W., 353
 Beck, J. W., 147
 Beck, L. Y., 353
 Becke-Goehring, M., 47
 Becker, E. D., 157, 448
 Becker, H. A., 78
 Beckett, C. W., 469
 Bedford, R. G., 16, 279
 Bedon, H. D., 16
 Beebe, R. A., 78, 79
 Beech, S. G., 353
 Beer, M., 360
 Beeson, D. M., 257
 Begun, G. M., 9
 Behr, J., 108
 Behrens, H., 458
 Behringer, R. E., 276
 Beinisch, A. N., 458
 Bellakova, V. V., 89
 Bell, G. M., 276
 Bell, J. A., 59
 Bell, R. P., 253
 Bell, W. E., 446
 Bellamy, L. J., 282
 Belle, J., 221, 419
 Bellemans, A., 273, 280
 Bellotti, A., 358
 Belyaev, A. I., 464
 Benaglia, A. E., 208
 Bénard, J., 89, 420, 421,
 464
 Bender, M. L., 173, 176,
 182, 183
 Bender, P. L., 446, 449
 Bendich, A., 361
 Béné, G., 450
 Benedek, G. B., 459
 Benesi, H. A., 40
 Bengough, W. I., 5, 18
 Benjamin, B. M., 181
 Bennett, J. E., 439
 Bennett, R. E., 464

- Bennett, R. G., 304, 442, 446
 Bennett, W., 292
 Benoit, H., 450
 Bensaason, R., 316
 Benson, G. C., 262, 266
 Benson, K. E., 229
 Benson, S. W., 1, 12, 16, 60, 62
 Bent, H. A., 395
 Bent, H. E., 4
 Benzinger, T. H., 3, 6
 Beránek, E., 8, 253
 Berends, W., 361
 Berezin, G. I., 81
 Berg, E. W., 137
 Berg, W. T., 11
 Berger, A., 198, 201
 Berggren, A., 138
 Bergson, G., 355
 Beringer, R., 147, 148, 155
 Berisford, R., 56
 Berkowitz, A. E., 227
 Berkowitz, J., 9, 10, 149, 221, 236, 237, 238, 264, 314, 463, 465
 Berkowitz, J. B., 264
 Berman, A., 10
 Berman, S. S., 137
 Bernas, A., 316
 Bernstein, H. J., 37, 337, 357, 447, 448
 Bernstein, R. B., 60
 Bernstorff, K., 276
 Berry, R. S., 465, 466
 Bersohn, R., 335, 339, 340, 437, 438, 439, 440, 441
 Bertaut, F., 92
 Berthet, G., 450
 Berthier, G., 340, 359
 Besch, P. K., 361
 Bethell, D., 170, 173, 176, 179, 350
 Betterton, J. O., Jr., 228, 229
 Beukers, R., 361
 Beusman, C., 221, 235, 238, 463
 Bever, M. B., 9, 220
 Bevington, J. C., 108
 Beychok, S., 212
 Bezzi, S., 357
 Bhattacharya, R., 353, 369
 Bianchi, E., 265
 Bickel, A. F., 105
 Biddiscombe, D. P., 12, 16
 Bieber, H. H., 135
 Bielstein, H. O., 467
 Bier, M., 210
 Bierlein, J. A., 145
 Bigelow, C. C., 119
 Bigorgne, M., 9
 Billings, J. J., 13, 448
 Billings, T. J., 15
 Bills, D. G., 82
 Binford, J. S., Jr., 464
 Bingen, R., 280
 Birch, F., 460
 Birchenall, C. E., 464, 465, 470
 Bird, G. R., 439
 Bird, R. B., 396
 Birks, J. B., 367
 Biras, F. W., 57, 343
 Bishop, A. S., 461
 Bishop, N. I., 361, 367
 Bissot, T. C., 15
 Bitsianes, G., 229
 Bitter, F., 333
 Bjellerup, L., 9
 Bjerrum, J., 253
 Bjerrum, N., 221, 249, 255, 263
 Björling, C. O., 138
 Black, I. A., 146
 Black, R. M., 308, 309
 Blackburn, P. E., 10, 222, 237, 464
 Blackwell, L. A., 364
 Blades, A. T., 57, 59
 Blake, N. W., 364
 Blanc, M., 9, 10, 11
 Blanchard, L. P., 467
 Blanchard, R., 227
 Blanchfield, R., 360
 Bland, J. A., 227
 Blankenship, F. F., 220, 221, 222, 236, 238, 277, 463
 Blatter, C., 265
 Blau, H. H., 458
 Bleaney, B., 443, 444, 445
 Blewitt, T. H., 425
 Blinc, R., 359
 Bliznyukov, V. I., 358
 Bloch, F., 449
 Blocher, J. M., Jr., 10
 Block, J., 86
 Bloembergen, N., 448, 449, 450
 Blois, M. S., Jr., 362, 439
 Bloom, A. C., 446
 Bloom, H., 9, 11, 234, 236, 467
 Blout, E. R., 196, 197, 198, 362
 Blue, G. D., 237, 465
 Blumberg, E. A., 301
 Blumberg, W. E., 413
 Blume, R. J., 282, 439, 449
 Blumenfeld, O. O., 211
 Blundell, A., 70
 Bluyholder, G., 464
 Boag, J. W., 322
 Bobka, R. J., 80
 Bochvar, D. A., 171, 353, 362
 Bock, E., 262, 367
 Bockris, J. O'M., 9, 11, 234, 238
 Bodo, G., 48
 Boer, E. de, 171, 339, 354, 436, 438
 Boer, J. H. de, 84, 91
 Böer, K. W., 94
 Boettcher, A., 458
 Bogdanov, V. S., 291
 Boggus, J. D., 367
 Bogolubov, N. N., 248
 Bogomolov, S. G., 357
 Bohl, R. W., 220
 Bohmfalk, E., 4
 Bollinger, L. E., 461
 Boltaks, B. I., 418
 Bolto, B. A., 178
 Bolz, L. H., 146, 157
 Bömmel, H. E., 410
 Bonham, R. A., 32, 44, 353
 Bonhoeffer, K. F., 146, 158
 Bonin, J. H., 464
 Bonner, O. D., 130
 Bonner, T. G., 18, 180
 Bonner, W. A., 161
 Bonnetain, L., 84
 Boog, W., 251
 Boorae, H. A., 10
 Booth, H. S., 12
 Borchardt, H. J., 4, 233, 465
 Borčić, S., 175
 Bordin, S., 262
 Borel, J.-P., 450
 Borey, L., 465
 Borg, R. J., 470
 Bornier, B. M. de, see Magnan de Bornier, B.
 Borovaya, F. E., 468
 Boston, C. R., 467
 Bothner-By, A. A., 447
 Bothner-By, C. T., 297
 Bothorel, P., 360
 Bottini, A. T., 170, 447
 Bottino, F., 357
 Bottomley, G. A., 12, 13, 15, 78
 Botreau, M. M., 363
 Bouby, L., 300
 Boudreux, E. A., 358
 Boulet, E., 358
 Bouman, J., 228
 Bouman, N., 362
 Bourlange, C., 10, 11
 Boussin, M. L., 464
 Bovey, F. A., 305, 354, 447
 Bowden, F. P., 303
 Bowen, E. J., 366
 Bowen, H. J. M., 31
 Bowers, G. H., 305, 306, 308
 Bowers, K. D., 443
 Bowers, V. A., 147, 148, 150, 155, 158, 160, 161, 440, 441, 442
 Bowman, J. C., 9

- Bowman, R. E., 234, 238, 466
 Boyarshinov, V. A., 458
 Boyd, G. E., 126
 Boyd, M. E., 344
 Boyd, R. H., 223
 Boyer, P. D., 11
 Boyko, E. R., 229
 Boyle, J. W., 293
 Boys, S. F., 345
 Brabers, M. J., 464
 Brabets, R. I., 8
 Bradbury, J. H., 196
 Bradley, D. C., 17, 263
 Bradt, P., 55, 149, 151, 156, 158
 Brady, G. W., 251
 Brady, L. E., 416
 Bragg, J. K., 193
 Bragin, O. V., 356
 Brand, J. A., 467
 Brand, J. C. D., 11
 Brandenberger, S. G., 180
 Brandt, I. V., 467
 Branson, H. R., 191
 Brasch, A., 293
 Bray, B. G., 316
 Brdicka, R., 298
 Brebrick, R. F., 411
 Breck, W. G., 10
 Bree, A., 367
 Brekke, O. L., 138
 Bremer, J. W., 94
 Bremer, R. F., 109
 Brenden, B. B., 459
 Brennan, D., 5
 Brenner, G., 447
 Brenner, S. S., 464, 467
 Brent, R., 273
 Bresesti, M., 254
 Breslow, R., 171, 362
 Brewer, D. F., 8
 Brewer, L., 233, 457, 458, 465, 466, 469
 Brewster, R. Q., 363
 Brickwedde, F. G., 5
 Bridges, D. W., 464
 Brigleb, G., 351, 367
 Brigman, G. H., 343
 Bringeland, R., 46
 Brion, H., 350
 Briscoe, C. V., 449
 Brisl, C., 231
 Britton, D., 461
 Britton, F. R., 396, 397, 398
 Bro, P., 6, 7, 12, 206
 Broadbent, H. S., 112
 Brobeck, W. M., 458
 Brockhouse, B. N., 410
 Brockman, R., 176
 Brodale, G., 11
 Brodd, R. J., 82
 Brode, H., 35
 Brode, W. R., 360
 Brodsky, M. B., 470
 Brody, S. S., 366
 Broersma, S., 449
 Broida, H. P., 145-68; 145, 146, 148, 150, 151, 152, 153, 154, 155, 159, 161, 362, 458, 459, 465
 Brokaw, R. S., 283, 469
 Bromberg, J. P., 448
 Brook, P. R., 447
 Brooks, F. P., 146
 Bross, A., 411
 Brossel, J., 446
 Broude, V. L., 356
 Brounshtein, B. I., 469
 Brovotto, P., 437
 Brower, K. R., 177
 Brown, B., 460
 Brown, D. A., 369
 Brown, D. W., 148, 150, 151, 155, 159
 Brown, F. H., 365
 Brown, G. M., 1
 Brown, H. C., 4, 5, 178
 Brown, H. W., 152, 153, 393
 Brown, J. A., 16
 Brown, P. G. M., 249
 Brown, R. D., 359, 363
 Brown, T. L., 282
 Brown, W. B., 275, 282
 Brown, W. E. L., 6
 Brownstein, M., 118
 Brownstein, S., 447
 Broyde, B., 366
 Bruch, C. A., 229
 Brück, D., 359
 Bruckner, R., 470
 Brulce, T. C., 183
 Bruijn, S. de, 362
 Bruins, P. F., 135
 Brüll, J., 79
 Bruma, M. M., 446
 Brun, O., 449
 Brunauer, S., 92
 Brunet, V., 65
 Brunisholz, G., 137
 Brutcher, F. V., Jr., 170, 447
 Bryce, W. A., 158
 Bubnov, N. N., 304
 Buchele, D., 458
 Büchler, A., 466
 Buchta, J. C., 449
 Buck, H. M., 369
 Buckingham, A. D., 258, 400, 401
 Buckingham, R. A., 333, 344
 Buckles, R. E., 368
 Budd, A., 365
 Buehler, R. J., 1
 Bues, W., 466
 Buff, F. P., 273
 Bugai, P. M., 375
 Buist, G. J., 173, 176
 Bulequicz, E., 467
 Bullock, J. S., 137
 Bullwinkel, E. P., 127
 Bülow, H., 298
 Bumble, S., 77
 Bunbury, D. L., 66
 Bunch, S. M., 355
 Bunker, D. L., 53, 54
 Bunnett, J. F., 169, 350
 Bunton, C. A., 177, 181, 260
 Bunzinskii, O. Z., 458
 Buraway, A., 354
 Burbank, R. D., 403
 Burdese, A., 10
 Burger, L. L., 303
 Burger, R. M., 92
 Burgers, J., 356
 Burgess, R. H., 70
 Burgess, W. G., 228
 Burhorn, Fr., 459
 Burk, D. L., 9, 10
 Burke, J. E., 420
 Burkhardt, L. C., 461
 Burlant, W. J., 108, 311, 316, 317, 318
 Burnett, G. M., 103-22; 104, 319
 Burns, J., 228
 Burns, R. E., 135
 Burrov, V. S., 467
 Burr, J. G., 290, 300, 303
 Burrows, J., 312
 Burton, M., 293, 299, 300, 301
 Burt, B. P., 291
 Busing, W. R., 404
 Buss, J. H., 1, 12, 16, 60, 62
 Busse, W. F., 305, 306, 308
 Butcher, K. L., 4
 Butement, F. D. S., 289
 Butler, J. N., 469
 Butt, E. P., 461
 Butterworth, J., 449
 Butuzov, V. P., 468
 Buzzell, A. S., 7
 Buzzell, J. G., 206
 By, A. A. B., see Bothner-By, A. A.
 By, C. T. B., see Bothner-By, C. T.
 Bykov, G. V., 352, 353
 Bykov, V. T., 79
 Bystrow, D., 179
 Bywater, S., 14, 15, 16
 C
 Cabral, J. d. O., 256
 Cabrera, N., 421, 423, 464
 Cady, H. H., 132, 253
 Caffrey, J. M., 301, 426
 Cagliotti, L., 355
 Cagniant, D., 357
 Cagniant, P., 357
 Cahn, J. W., 92
 Caillat, R., 464

- Cairns, T. L., 369
 Calcote, H. F., 461
 Caldwell, W. C., 470
 Calfisch, E. G., 16, 17
 Calkins, G. D., 136
 Call, F., 14
 Callaghan, L., 306
 Calvert, J. G., 11, 58, 63, 65, 68
 Calvert, R., 262
 Calvet, E., 3, 7
 Calvin, M., 361, 366, 367
 Cambeiro, M., 12, 14, 15
 Cameron, A. J. W., 367
 Camia, F., 3, 7
 Campbell, A. N., 262
 Campbell, D. H., 15, 207
 Campbell, D. S. E., 363
 Campbell, E. S., 60
 Campbell, L. E., 10
 Camplon, D. E., 5
 Canady, W. J., 5, 7, 11, 12, 14, 15, 17, 259
 Canel, E., 298
 Cann, J. R., 206
 Cannon, C. G., 351
 Cantor, S., 222, 236, 238, 463
 Cappellina, F., 262
 Caramazza, R., 253
 Carbonell Vila, L., 357
 Cardinad, R., 280
 Carleton, N. P., 82
 Carlin, R. B., 104
 Carlson, E. T., 233
 Carpenter, C. L., Jr., 359
 Carr, A., 357
 Carr, H. Y., 449
 Carrá, S., 355
 Carrington, A., 448
 Carroll, J. L., 135
 Carruthers, R., 461
 Carson, A. S., 5, 15
 Carsten, M. E., 204
 Carswell, D. J., 367
 Carter, C., 333
 Carter, W., 5
 Cartes, J. A., 464
 Cartwright, J., 79
 Carver, T. R., 446
 Casali, L., 5
 Caserio, M. C., 169
 Cashion, J. K., 55, 392
 Casida, J. E., 138
 Cass, R. C., 12, 13, 16, 17
 Castellán, G. W., 278
 Castineira, C. M., 8
 Castle, J. W., 415
 Castner, T. G., 413
 Catalano, E., 16, 404
 Cathcart, D., 363
 Cathcart, J. V., 464
 Cerfontain, H., 62, 63, 67
 Chace, W. G., 460
 Chackett, K. F., 81
 Chako, N. Q., 400
 Chakravarti, R. N., 361
 Chalandon, P., 179
 Challis, B. C., 173
 Chalvet, O., 340, 353
 Chamberlain, J. W., 459
 Chambers, J. F., 262
 Champagne, M., 206
 Chandra, S., 463
 Chandrasekharalah, M. S., 464
 Chang, J., 300
 Chang, P. C., 301
 Chao, T. S., 358
 Chapin, D. S., 89
 Chapiro, A., 108, 300, 316, 318
 Chapman, S., 469
 Chappel, F. P., 12
 Charles, R. G., 464
 Charlesby, A., 289-330; 300, 305, 306, 308, 312, 314, 317, 319, 320
 Charlwood, P. A., 206
 Charney, E., 398
 Charnley, T., 5
 Charsley, P., 421
 Charton, M., 461
 Charuel, R., 3, 7
 Chatt, J., 256, 350
 Chatterjee, S. N., 92
 Chauvin, M., 359
 Chelintzev, V., 6
 Chen, C. H., 128
 Chen, C.-T., 180
 Chen, F.-C., 359
 Chen, M., 464
 Chen, T. C., 354
 Chen, W. T., 468
 Cheng, C.-C., 355
 Chenon, B., 363
 Cherniak, E. A., 300
 Cherniak, N. J., 301, 304
 Chernick, C. L., 4, 5, 6, 9
 Chervenka, C. H., 212
 Chervinskaya, O. V., 128
 Chesnut, D. B., 160, 339, 340, 354, 435, 436, 438, 439, 441
 Chessick, J. J., 128
 Chester, G. V., 273
 Chiang, Y., 465
 Chiba, T., 39
 Chick, D. R., 461
 Chierici, L., 355
 Chihara, H., 447
 Chikayama, A., 361
 Childers, C. W., 265
 Chiltz, G., 60
 Chinarov, Yu. S., 458
 Chiotti, P., 229, 467
 Chipault, J. R., 303
 Chipman, J., 224
 Chirkov, N. M., 17, 176
 Chisholm, D. A., 397, 398
 Chloupek, F., 182, 183
 Chmátal, V., 358
 Chobtschenkov, A. N., 43, 44
 Chomet, S., 463
 Chomse, H., 365
 Chou, C., 9
 Choudhury, N. K., 366
 Chow, C., 10
 Chow, Y.-L., 182
 Christensen, A. U., Jr., 9, 10
 Christensen, C. J., 464
 Christensen, D., 33, 34
 Christie, M. I., 56
 Christofilos, N. C., 461
 Christy, R. W., 412
 Christyakov, A. L., 171, 353, 362
 Chubb, T. A., 355
 Chupka, W. A., 9, 10, 149, 221, 236, 237, 238, 463, 465, 466
 Churchill, S. W., 461
 Chwoles, A. E., see Englert-Chwoles, A.
 Chynoweth, A. G., 415
 Cimino, A., 86
 Ciporin, L., 357
 Claasen, H. H., 8
 Claeson, M., 104
 Clar, E., 352
 Clare, J. W. H., 227
 Clark, A., 355
 Clark, D., 227
 Clark, D. J., 14
 Clark, H. C., 8, 9, 10
 Clark, I. T., 132
 Clark, J. B., 226
 Clark, S. P., Jr., 460
 Clay, P. G., 296
 Clayton, J. M., 180
 Clayton, R. N., 10
 Cleek, G. W., 231
 Clemensen, R. E., 458
 Clement, N., 9
 Clementi, E., 365, 366
 Cleveland, F. F., 13, 14
 Clever, H. L., 258, 281
 Clopp, P. P., 86
 Clouston, J. G., 460
 Clunie, J. C., 78
 Clusius, K., 8, 9, 10
 Coble, R. L., 420
 Coburn, W. C., 282
 Cochran, E. L., 440, 441, 442
 Cockbain, E. G., 108, 318
 Cockerell, L. D., 130
 Cochran, E. L., 147, 148, 150, 155, 158, 160, 161
 Codrington, R. S., 450
 Coe, D. G., 303
 Coffman, R., 357
 Cognac, B., 446
 Cohen, A. D., 447
 Cohen, I., 355
 Cohen, M., 220
 Cohen, S. G., 111

- Cohen, S. R., 255
 Cohen-Bazire, G., 361, 367
 Cole, T., 150, 440, 441
 Colegrove, F. D., 446
 Coleman, D., 111
 Coleman, J. S., 205, 206
 Coleman, R. V., 421, 422
 Colgate, S. A., 460
 Collichman, E. L., 319
 Colin, C. N., see Naar-Colin, C.
 Collen, B., 232
 Colleter, J.-C., 253
 Collette, R. L., 468
 Collin, R. L., 305
 Collins, A. C., 83
 Collins, C. J., 170, 176, 181
 Collins, E., 115
 Collins, F. C., 284
 Collins, R. L., 449
 Collinson, E., 300
 Colocchia, E., 57
 Colombani, J., 93
 Colomina, M., 11, 12, 14, 15, 17
 Colpa, J. P., 281, 396, 398, 399
 Colman, R. R., 425
 Combrisson, J., 449
 Compaan, K., 417
 Companion, A. L., 343
 Compere, E. L., 296
 Compton, D. M. J., 367
 Compton, L., 460
 Compton, V. B., 227
 Compton, W. D., 414
 Condon, E. U., 398
 Conn, J. B., 2, 4, 5
 Conn, W., 460
 Connick, R. E., 132, 253, 256
 Connor, T. M., 448
 Conradi, J. J., 171
 Conroy, H., 447
 Constabaris, G., 79
 Constable, R. F. S., see Strickland-Constable, R. F.
 Convent, L., 113
 Conway, D., 176
 Conway, J. B., 459
 Cook, D., 353
 Cook, G. B., 345
 Cook, G. R., 355
 Cook, J. P., 467
 Cook, K. E., 359
 Cook, N. C., 467
 Cook, R. E., 18
 Cooke, J. R., 170
 Coombes, J. D., 117
 Coon, J. B., 365
 Cooper, G. D., 16
 Cooper, L. N., 409
 Cooper, W., 59, 109
 Copley, E. D., 263
 Corbett, J. A., 125
 Corbett, J. W., 425
 Cordes, H. F., 9
 Cordier, J., 225
 Corenzwit, E., 227
 Corey, E. J., 447
 Corey, R. B., 191
 Corio, P. L., 176, 447
 Cornaz, J. P., 127
 Cornaz, P., 450
 Cornellus, J. A., 262
 Cornides, I., 417
 Corning, M. E., 360
 Corruccini, R. C., 458
 Corwin, J. F., 233, 468
 Cost, L., 298, 299
 Costain, C. C., 34, 36, 353, 405, 466
 Cottingham, R. L., 94
 Cotton, F. A., 369, 448
 Cottrell, A. H., 416
 Cotts, R. M., 449
 Coughlin, J. P., 10, 11
 Coulomb, P., 420
 Coulson, C. A., 333, 342, 343, 349, 353, 355, 363, 400
 Coulson, R., 396
 Count, A. D., 465
 Couper, A., 85
 Couper, M. A., 185
 Courtney, W. G., 421
 Coussemant, F., 177
 Cowan, C. T., 126
 Cowan, P. M., 198
 Cowan, R. D., 469
 Cowperthwaite, M., 57
 Cox, J. D., 12, 15, 16, 17, 18
 Cox, J. T., 94
 Cox, R. A., 299, 302
 Cragg, L. H., 118, 119
 Craggs, J. D., 459
 Craig, D., 192
 Craig, D. P., 353, 356, 357, 364
 Craig, L. C., 192
 Craig, R. G., 81
 Craig, R. S., 226
 Crall, L., 464
 Cram, D. J., 357
 Crandall, H. F., 257
 Cratty, L. E., Jr., 85
 Crawford, B., Jr., 395, 399, 403
 Crawford, H. R., 1
 Crawford, J. H., 425
 Crawford, M. F., 396, 397, 398
 Crawford, N. W., 280
 Crawford, R. J., 172
 Crawford, V. A., 389
 Cremer, E., 80
 Crick, F. H. C., 191, 192, 200
 Criegee, R., 169
 Crisler, R. O., 363
 Crocco, L., 461
 Croll, I. M., 279
 Cromwell, N. H., 357, 359
 Crosby, G. A., 367
 Cross, L. C., 31
 Crouch, E. A. C., 125
 Cruickshank, E. H., 129
 Császár, J., 369
 Cubicciotti, D. D., Jr., 220, 221, 222, 236, 238, 463, 465
 Cueilieron, J., 227
 Cullington, E. H., 460
 Cullis, C. F., 60, 70, 71, 189
 Cullity, B., 229
 Culvahouse, J. W., 449
 Culver, R., 88
 Culvern, J. B., 257
 Cumper, C. W. N., 43, 358
 Cundall, C. M., 459
 Cunningham, C. M., 89
 Cunningham, J., 303, 426
 Cunningham, R. E., 85
 Curl, R. F., Jr., 1
 Currell, D. L., 178
 Curtin, D. Y., 172
 Curtis, C. E., 232
 Curtis, C. F., 283
 Curtis, W., 360, 364
 Cushing, R. L., 3
 Čuša, F., 8, 253
 Cuthbertson, G. R., 4
 Cutler, I. B., 464
 Cutler, M. E., 9, 11, 17
 Cutler, W. G., 18, 280
 Čvetanović, R. J., 68
 Cyvin, S. J., 356
 Czapski, G., 295
 Czekalla, J., 365

D

- Daane, A. H., 9, 237, 458
 Daasch, L. W., 282, 368
 Dabrowska, U., 363
 Dacey, J. R., 78
 Dagg, J. R., 398
 Dahlgard, M., 363
 Dahlgren, G., 60
 Dalley, B. P., 34, 36
 Dainton, F. S., 4, 5, 16, 18, 300
 Dalby, F. W., 393
 Dallinga, G., 170, 171, 362
 Dalton, F., 117
 Daly, L. H., 12
 Damany, H., 93
 Damaek, A. C., 427
 Dammers-de-Klerk, A., 365, 366
 Damon, C. B., 225
 Danby, C. J., 59
 Daniel, H., 174
 Daniels, F., 14, 63, 233, 465
 Daniels, M., 292, 296

- Danielson, G. C., 9
 Danno, A., 307, 308, 310, 311, 314, 315
 Danon, J. S., see Sebban-Danon, J.
 Danyluk, S. S., 11, 14, 17
 Darnell, A. J., 10, 238
 Das, M. N., 59
 Das, T. P., 335, 413, 445
 Dasgupta, B., 361
 Dash, W. C., 416, 422
 Datta, H. C., 383, 366
 Datta, S. P., 13, 14, 17
 Datz, S., 461
 Dauben, C. H., 228
 Dauben, H. J., Jr., 369
 Daudel, R., 340, 349, 350, 353
 Daut, J. G., 8
 Davankov, A. B., 127, 128, 137
 Davidenko, N. K., 17, 254
 Davidson, H. W., 470
 Davidson, J. M., 171
 Davidson, N., 53, 54, 55, 162, 449, 461
 Davidson, N. R., 55, 441
 Davies, C. W., 263
 Davies, D. R., 133
 Davies, E. W., 256
 Davies, M., 360
 Dayles, N. R., 256, 350
 Davies, R. E., 355
 Davies, W. G., 256
 Davis, M. M., 18
 Davis, R. E., 363
 Davis, T. P., 459
 Davis, T. W., 295
 Davison, W. H. T., 291, 308, 316
 Davydov, A. T., 129
 Davydov, V. I., 9
 Davydova, O. R., 84
 Dawson, J. P., 14
 Dawson, L. R., 263
 Dayhoff, M. O., 351, 352
 Deal, B. E., 464
 Dean, C., 449
 Dean, D. J., 9
 Dearborn, E. F., 232
 Dearden, J. C., 356
 Deardorff, D. K., 470
 Dearman, H. H., 339, 354, 435, 436, 438
 De Bethune, A. J., 259
 DeBlois, R. W., 422
 de Boer, E., see Boer, E. de
 de Boer, J. H., see Boer, J. H. de
 de Bornier, B. M., see Magnan de Bornier, B. de Bruijn, S., see Bruijn, S. de
 Debye, P., 266
 Decius, J. C., 402, 403
 Deckers, J., 461
 Deeley, C. W., 307, 311
 de Groot, M. S., see Groot, M. S. de
 Dehmelt, H. G., 446
 Dehn, R., 459
 Deitz, V. R., 84, 464
 de-Klerk, A. D., see Dammers-de-Klerk, A.
 de la Banda, J. F. G., see Garcia de la Banda, J. F.
 de Laet, W., see Laet, W. de
 de la Mare, P. B. D., see Mare, P. B. D. de la
 Delbecq, C. J., 413
 Dell, P. A., 470
 Dell, R. M., 88
 Dellis, A. N., 461
 Del Re, G., 352
 Delvaux, M. C. de W., see Wilde-Delvaux, M. C. de
 De Maine, P. A. D., 282, 369
 DeMaria, G., 9, 237
 Demonterik, Z. G., 127, 128, 131
 Denison, J. T., 249, 255
 Denney, D. B., 174, 175
 Deno, N. C., 169, 177, 350, 362
 Dent, L. S., 467
 de Pauer, A., see Pauer, A. de
 Derbyshire, W. D., 464
 Derganc, W., 458
 Derjaguin, B. V., 78, 90, 92
 Derkosch, J., 359
 der Meij, P. H. van, see Meij, P. H. van der
 de Ruyter van Steveninck, A. W., see Ruyter van Steveninck, A. W. de
 der Waals, J. H. van, see Waals, J. H. van der
 Deschamps, J., 359
 DeSesa, M. A., 137
 Deshpande, S. M., 363
 Desmyter, A., 280
 Desmoyers, J. E., 9
 DeSorbo, W., 9, 10
 Desreux, V., 314
 Deuel, H., 127, 138
 Dev, S., 447
 DeVries, R. C., 231
 Dewar, J., 145
 Dewar, M. J. S., 352, 353, 357, 358
 Dewhurst, H. A., 300, 301, 306, 307, 309
 Dewhurst, K. C., 357
 de Wilde-Delvaux, M. C., see Wilde-Delvaux, M. C. de
 Dewing, E. W., 8, 466
 de Witte, L., see Witte, L. de
 Dexter, D. L., 413, 414
 Diagnault, L. G., 59
 Diamant, R., 467
 Diamond, F., 446
 Diamond, J. M., 59
 Diamond, R. M., 253
 Diaper, J., 4, 5
 Dibeler, V. H., 8, 55, 149, 151, 153, 156, 157
 DiBenedetto, A. T., 134
 Dickel, G., 133
 Dickens, P. G., 350
 Dickenson, A. F. T., see Trotman-Dickenson, A. F.
 Dickerman, P. J., 459
 Dickerson, R. E., 45
 Dickinson, W. C., 335
 Dickson, A. D., 399
 Diederichsen, J., 461
 Diehl, P., 448
 Dienes, G. J., 427
 Dietzel, A., 470
 Diev, N. P., 9
 DiGlorio, V. E., 359
 Dillon, J. A., Jr., 88
 DiMarzio, E. A., 193
 Diner, R. M., 10, 11, 465
 Diner, S., 359
 Dinkelacker, F., 226
 Dinniny, R. E., 80
 Dintzis, H. M., 48
 Dismukes, E. B., 264
 Ditter, J., 162
 Dittrich, W., 293
 Dixon, R. N., 362
 Dobbs, E. R., 8
 Dobry, A., 6, 7, 206
 Dodge, B. F., 469
 Doering, W. von E., 4
 Dolar, D., 129
 Dole, M., 16, 261, 307, 308, 310
 Dolecek, R. L., 9
 Döllner, E., 357
 Dolliver, M. A., 214
 Dolphin, G. W., 322
 Domagala, R. F., 228
 Domash, L., 5
 Domb, C., 277
 Dombi, J., 365
 Dombrovskii, A. V., 360
 Domingo, R., 353, 357
 Donahue, F. J., 227
 Dondos, S., 61, 291
 Donn, B., 145
 Donnelly, T. H., 6, 193, 206, 207
 Donnet, J. B., 87, 89
 Donohue, J., 31, 46, 47
 Donovan, J. W., 193, 212, 361
 Dorabalska, A., 8
 Dorain, P. B., 444
 Dorfman, L. M., 66, 291
 Dorfman, M., 4
 Dorgelo, G. J. H., 88
 Dörr, F., 359, 365

- Dose, K., 298
 Doty, M. E., 419
 Doty, P., 118, 196, 197, 198, 362
 Douglas, J. E., 60
 Douglas, T. B., 10, 11
 Doull, N. J., 467
 Doumani, T. F., 302
 Douslin, D. R., 14
 Dousemanis, G. C., 158, 466
 Dowden, D. A., 85
 Downer, J. M., 113, 115, 319
 Dowling, J. M., 33, 44, 353
 Downes, A. M., 321
 Downing, J. H., 220, 222
 Dows, D. A., 157, 403, 465, 466
 Doyle, W. L., 459
 Doyle, W. T., 413, 414
 Dragedorf, R. D., 422
 Drahmman, J. B., 161
 Drahowzal, F., 180
 Dranen, J. van, 361
 Dransfeld, K., 410
 Drickamer, H. G., 281, 283, 414
 Drinkard, W., 448
 Driscoll, R. L., 449
 Drowart, J., 9, 221, 237, 465
 Drozdov, N. P., 128
 Drummond, I. E., 459
 Dryden, J. S., 412
 Dubien, J. J., see Jousot-Dubien, J.
 Dubinin, M. M., 77, 78
 Duchesne, J., 355
 Duclaux, J., 6
 Duculot, C., 353
 Duerig, W. H., 146
 Duff, G. M. S., 15, 17
 Duff, R. E., 60, 461
 Duffey, D., 312
 Duffy, J. F., 229
 Duflo, M., 296
 Duke, F. R., 109, 235, 467
 Dumitru, E. T., 198, 199
 Duncan, A. B. F., 355
 Dunkerley, F. J., 223
 Dunlap, D., 16
 Dunlap, R. D., 279
 Dunn, A. S., 14, 112, 113, 115
 Dunn, F., 12, 18
 Dunne, T. B., 466
 Dunne, T. G., 10
 Dupré, A., 93
 Durrell, J., 5, 6, 7, 13, 15
 Durham, E. J., 13
 Durham, G. S., 79
 Durup, J., 315
 Duval, X., 84, 464
 Duwez, P., 232, 459
 Dux, J. P., 134
 Dvorjankina, G. G., 43
 Dyall, L. K., 169, 363
 Dyatkina, M. Ye., 353
 Dykman, I. M., 88
 E
 Earl, J. C., 352
 Easton, D. S., 228
 Eaton, R. S., 158
 Eaves, D. E., 108
 Eberhardt, W. H., 256
 Eberlin, E. C., 355
 Ebisuzaki, Y., 419
 Eck, C. L. van P. van, see Pantheon van Eck, C. L. van
 Eckstein, B. H., 10
 Eckstein, Z., 356
 Edelhoch, H., 210
 Edels, H., 459
 Edgar, O. B., 117
 Edgecombe, F. H. C., 61
 Edison, D. H., 175
 Edsall, J. T., 192, 212
 Edse, R., 461
 Edward, J. T., 357
 Edwards, J. W., 154, 155, 158, 162, 233, 468
 Edwards, R. K., 220, 222, 464, 470
 Effinger, J., 353, 358
 Egan, E. P., 259
 Egerton, A. C., 158
 Egerton, G. S., 359, 360
 Eggers, D. F., 34
 Ehler, A. W., 355
 Ehlers, R. W., 256
 Ehlert, T. C., 470
 Ehrenpreis, S., 193, 206, 207
 Ehrenson, S. J., 447
 Ehrlich, G., 79, 82, 83, 81
 Eia, G., 40, 41
 Eldinoff, M. I., 299
 Eigen, M., 265
 Eingwald, E. L., 111
 Eisen, H. N., 204
 Eisenstadt, M., 221, 236, 238
 Eisinger, J., 88, 449
 Eischens, R. P., 91
 Eisner, U., 355
 Ekegren, S., 5
 El-Abbady, A. M., 18, 301, 302
 El-Aggar, A. M., 263
 Elamayem, M. S. A., 260
 Eldin, Z. P. Z., see Zein-Eldin, Z. P.
 Eley, D. D., 85, 86
 Eliei, E. L., 170, 173
 Elizar, V. N., 459
 Ellinger, F. H., 232
 Elliott, J. S., 253
 Elliott, R. O., 470
 Elliott, R. P., 228
 Ellis, A. J., 468
 Ellis, C. P., 470
 Ellis, J. F., 280
 Ellison, F. O., 343
 Elovich, S. Ju., 89
 Elovitch, S. J., 84
 Elphimoff-Felkin, I., 181
 Elyutin, V. P., 470
 Emanuel, N. M., 301
 d'Emaus, H. M., 316
 Emeleus, K. G., 147
 Emery, E., 4
 Emmart, E. W., 360
 Emmett, P. H., 84, 85
 Emsley, J. F., 448
 Emslie, A. G., 458
 Ender, F., 9
 Endter, F., 467
 Endow, N., 58, 61
 Engelhard, H., 298
 Engell, H. J., 424
 Engelsma, J. W., 60
 Englert-Chwoles, A., 273
 Enina, V. A., 458
 Ens, A., 206
 Entelis, S. G., 17, 176
 Eppler, R. A., 414
 Epstein, L. M., 306
 Epstein, S. I., 207
 Erb, E., 90, 450
 Erbeia, A., 450
 Erdős, E., 265
 Eremenko, V. N., 458
 Ergun, S., 464
 Erickson, J. M., 130
 Erickson, R. E., 368
 Ericson, M., 411
 Ericson-Galula, M., 411
 Eriks, K., 45
 Ermakova, V. A., 228
 Erokhin, V. M., 293
 Ershler, B. V., 295
 Ervin, G., 464
 Eshbach, J. R., 332
 Eshelby, J. D., 415
 Esin, O. A., 470
 Espenscheid, W. F., 257
 Estermann, I., 10
 Eucken, M., 8, 9
 Euler, J., 459
 Evans, A. G., 5, 172, 261
 Evans, D. F., 364
 Evans, H. G. V., 148, 149
 Evans, R. J., 176
 Everett, A. J., 158
 Everett, D. H., 14
 Everett, L. H., 222, 464
 Everest, D. A., 130, 132, 137
 Ewing, C. T., 10
 Exner, O., 354
 Eyring, H., 170, 252, 352, 464
 Eyring, L., 232

Ezerskaya, N. A., 137

F

Fahey, R. C., 175
 Fahrenfort, J., 251
 Fairbairn, A. R., 461
 Fairbrother, D. M., 10
 Faizullov, F. S., 458
 Falk, M., 260
 Falkenhagen, H., 247, 262
 Fallon, L. D., 258
 Falta, E., 357
 Fang, F. T., 173
 Farber, M., 9
 Farnsworth, H. E., 88, 92
 Farrar, T. C., 342
 Fasman, G. D., 198
 Fassell, W. M., Jr., 464
 Fava, A., 184
 Favini, G., 355, 358
 Feber, F., 8
 Feeney, R. E., 138
 Feher, G., 449
 Feinleib, M., 470
 Fejes, P., 81
 Feldman, S., 461
 Felkin, I. E., see
 Elphimoff-Felkin, I.
 Felmayer, W., 367
 Feng, P. Y., 302, 321
 Fenimore, C. P., 461
 Ferguson, E. E., 282, 368
 Ferguson, F. A., 458
 Ferguson, J., 357, 365,
 366, 367
 Fernandez Alonso, J. I.,
 353, 357
 Fernando, Q., 357
 Fernellus, W. C., 359
 Fernholt, L., 36, 43
 Ferris, L. M., 256
 Ferro, R., 229
 Ferroni, S., 437
 Fetter, N. R., 9
 Ficken, G. E., 127
 Field, F. H., 160, 289,
 290
 Fielden, M., 109
 Fielding, P. E., 367
 Figini, R. V., 57
 Filbert, R. B., Jr., 234,
 238, 466
 Fillimonow, W., 179
 Fink, R. W., 63
 Finke, H. L., 12, 16
 Finkelberg, W., 460
 Finkel'shtein, A. I., 352
 Firsanova, L. A., 464
 Firsov, V. G., 295
 Fischer, E., 360, 363
 Fischer, E. O., 12, 369
 Fischer, H., 460
 Fischer, J., 11
 Fischer, L., 259
 Fischer, R., 363
 Fischer, W. A., 458

Fischer-Hjalmars, I.,
 363
 Fisher, B. B., 8, 77
 Fisher, G. S., 18
 Fisher, J. C., 411
 Fishman, N., 458
 Fitterer, D. W., 298
 Fitts, D. D., 197, 349,
 350, 362
 Fitzgerald, M. E., 459
 Fixman, M., 118
 Flaherty, P. H., 255
 Flanagan, T. B., 303
 Flanders, D. A., 292
 Flaschen, S. S., 468
 Fleming, R. A., 235
 Fletcher, W. H., 9
 Fletcher, S. E., 12, 13,
 16, 17
 Flint, O., 464
 Flis, I. E., 8
 Flitcroft, T., 4, 5
 Flood, E. A., 88
 Flood, H., 233, 235
 Floridis, T. P., 224
 Florin, R. E., 148, 150,
 151, 159
 Flory, P. J., 16, 191, 194,
 195, 198, 199, 209, 210,
 212
 Flowers, R. H., 260
 Fluher, R., 139
 Fluit, J. M., 428
 Foex, M., 459
 Fogg, P. G. T., 252
 Follenius, M., 133
 Folman, M., 88
 Foner, S. N., 9, 147, 148,
 150, 155, 157, 158, 160,
 161, 440, 441, 442
 Fontana, B. J., 150, 151
 Fontijn, A., 301
 Forbes, W. F., 354, 356,
 363
 Ford, H. W., 58, 61
 Ford, R. A., 359, 365
 Forestier, H., 88
 Forgeng, W. D., 422
 Forist, A. A., 109
 Förland, T., 234, 467
 Formanek, H., 303
 Forrest, W. W., 6
 Forst, W., 56, 70, 149
 Forster, L. S., 359,
 365
 Förster, T., 357, 360, 364
 Foss, J. G., 78, 193
 Foss, O., 45, 46
 Foster, J. F., 206, 211
 Foster, L. M., 470
 Foster, R., 357, 368
 Fournet, G., 274, 276
 Fowell, P. A., 14
 Fowler, A. B., 88
 Fraenkel, G., 171
 Fraenkel, G. K., 435-56;
 146, 338, 437, 441

Franc, J., 363
 Francis, A. W., 280
 Francis, W. E., 283
 Franck, E. U., 468
 Franck, H. H., 155, 158
 Franck, J., 361
 Frank, A., 332
 Frank, F. C., 419
 Frank, H. S., 84, 250
 Frank, P. J., 447
 Frank, W. B., 470
 Franken, P. A., 446,
 447
 Frankevich, Ye. L., 363
 Franklin, A. P., 227
 Franklin, J. L., 145-68;
 8, 55, 149, 151, 153, 156,
 157, 160, 289, 290, 368
 Franklin, J. N., 132, 133
 Franks, J., 421
 Franzosini, P., 10, 18
 Frasson, E., 357
 Frazer, J. W., 17
 Freamo, M., 156
 Fred, M. S., 349, 368
 Freed, S., 361, 366
 Freedman, H. H., 356
 Freedman, J. F., 277
 Freeman, A. J., 344
 Freeman, G. R., 59
 Freeman, J. P., 356
 Freeman, M. P., 79, 277
 Frei, K., 447
 Frei, Y., 360
 Freise, V., 135
 French, C. M., 171
 French, C. S., 361, 367
 Frenkel, V. Y., 459
 Fresco, J. R., 196
 Frey, H. M., 56, 69
 Friauf, R. J., 419
 Fricke, H., 292, 298
 Fried, S., 126
 Friedberg, S. A., 9, 10
 Friedman, H. A., 234, 238
 Friedman, H. L., 258, 295
 Friedman, L., 236
 Friedman, R. H., 344
 Friend, F. P., 34, 36
 Frish, S. E., 465
 Fristrom, R. M., 60
 Fritz, J. J., 12, 264
 Frolen, L. J., 356
 Fromageot, C., 212
 Fromm, H. J., 11
 Frondel, C., 468
 Frost, A. A., 351
 Frost, A. V., 467
 Frost, G. B., 10
 Frow, F. R., 14
 Fruton, J. S., 6, 206
 Fry, D. W., 461
 Frydman, M., 8, 9
 Fueki, K., 90, 91
 Fuget, C. R., 264
 Fujii, W., 334
 Fujimori, E., 366

- Fujimoto, M., 160, 392, 442, 443
 Fujimoto, S., 5, 15, 18
 Fujita, Y., 83
 Fujiwara, S., 447
 Fukada, E., 320
 Fukui, K., 356
 Fukushima, E., 412
 Fuller, R. C., 361, 367
 Fumi, F. G., 411, 417
 Fumoya, T., 64
 Funke, G. W., 155
 Funke, V. F., 470
 Funt, B. L., 115
 Fuoss, R. M., 249, 255, 261, 263, 264
 Furberg, S., 45, 46
 Furlani, C., 260
 Furst, M., 365
 Furth, H. P., 460
 Fuschillo, N., 307
 Futrell, J. H., 302
 Fyfe, W. S., 368, 468
- G
- Gadecki, F. A., 369
 Gager, W., 157
 Gagnaux, P., 179
 Gained, V. S., 18
 Gaines, G. B., 458
 Gaines, G. L., 136
 Gajewska, E., 209
 Galimberti, P., 361
 Gallagher, J. S., 150, 154
 Galloway, W. S., 32
 Gallily, I., 92
 Galula, M. E., see Ericson-Galula, M.
 Gancy, A. B., 257
 Gandry, H. A., 18
 Ganguli, N. C., 79
 García de la Banda, J. F., 87
 Gardner, P. D., 357
 Gardner, R. W., 176, 360
 Gargya, L., 365
 Garifanov, N. S., 439
 Garland, C. W., 91
 Garner, R. H., 4, 14, 15
 Garner, W. E., 82
 Garrett, A. B., 254
 Garrett, C. G. B., 367
 Garrett, E. R., 183
 Garrett, R. R., 198, 199
 Garrison, A. K., 466
 Garrison, W. M., 292, 298
 Gärtner, K., 79
 Garvin, D., 461
 Gatos, H. C., 88, 94
 Gault, Y., 181
 Gäumann, T., 357, 358
 Gavriluk, V. M., 88, 89
 Gavrilov, B. G., 13, 14
 Gaydon, A. G., 155, 158, 460, 461
- Gazho, Ya., 369
 Gealer, R. L., 461
 Gebhardt, J., 88
 Gee, G., 118
 Gehatia, M., 192
 Gehman, W., 461
 Gehrke, H. W., 466
 Geib, K. H., 146, 158
 Gelduscheck, E. P., 6, 7, 13
 Geiger, F. E., Jr., 449
 Geiger, J. S., 147
 Geise, C. F., 238
 Geiseler, G., 14
 Gelblum, E., 12, 18
 Geller, S., 229
 Gelles, I. L., 444
 Gellner, O. H., 5
 Gendrin, R., 450
 Gentsch, H., 88
 George, A., 14
 George, J. W., 448
 George, M. V., 447
 George, T. H., 92
 Gerasimov, V. G., 79
 Gerbler, J., 363
 Gerds, A. F., 464
 Gerosa, V., 361
 Gerson, F., 357, 358
 Gesser, H., 64
 Ghaisas, V. V., 360
 Ghormley, J. A., 158, 159
 Giannini, G. M., 460
 Gianque, W. F., 8, 11, 459
 Gibb, T. R. F., Jr., 224, 230, 467
 Gibbs, D. S., 464
 Gibbs, J. H., 193
 Gibbs, P., 87, 416
 Gibson, A., 461
 Gibson, J. F., 159, 160, 361, 442
 Giese, C. F., 9, 10, 465
 Giguère, P. A., 70, 158, 260, 402
 Giles, C. H., 363
 Gilkerson, W. R., 249, 255
 Gill, D., 449
 Gill, E. K., 290
 Gill, K. J., 229
 Gill, S. J., 264
 Gilles, P. W., 10, 238, 469
 Gillespie, R. J., 16, 259, 260
 Gilman, J. J., 415, 416, 426
 Gilmer, R. M., 469
 Gindin, Y. I., 467
 Giner-Sorolla, A., 361
 Ging, N. S., 6
 Ginoza, W., 304
 Gintis, D., 4, 5
 Gloumousis, G., 290
 Girifalco, L. A., 411
 Gislén, N., 300
- Given, P. H., 353
 Givens, M. P., 94
 Gjalbaek, J. C., 281
 Glantz, J., 312
 Glaser, F., 11, 12, 13, 14, 15, 17, 18
 Glasser, F. P., 231
 Glassman, I., 461
 Glassner, A., 469
 Glatz, A., 180
 Glauber, R., 34, 44
 Glazier, E. R., 447
 Glegg, R. E., 313
 Glemser, O., 9, 238, 466, 468
 Glick, H. S., 61, 461, 465, 467
 Glick, R. E., 447
 Glines, A., 108
 Glocker, R., 295
 Glueckauf, E., 135
 Gluck, R. E., 354
 Glushko, Ye. I., 179
 Goates, J. R., 280
 Godbole, E. W., 265
 Goedheer, J. C., 361
 Goehring, M. B., see Becke-Goehring, M.
 Golav, M. J. E., 449
 Gold, V., 169-90: 170, 173, 176, 179, 350
 Goldberg, A., 9, 223, 277
 Goldblith, S. A., 303, 321
 Golden, J. A., 55
 Golden, S., 146, 276
 Goldfarb, A. R., 361
 Goldfien, A., 366
 Goldfinger, P., 60, 66
 Goldin, H., 298
 Goldman, D. T., 428
 Goldman, J. M., 363
 Goldman, M., 448, 449
 Goldschmidt, H. J., 467
 Goldstein, J. H., 359
 Goldzieher, J. W., 361
 Gołęblewski, A., 354
 Golike, R. C., 399
 Golovanov, P. I., 125
 Golovaty, R. N., 130, 136
 Golovina, A. P., 369
 Golub, M. A., 315
 Golubenkova, L. L., 116, 117
 Gomer, R., 90, 91, 422, 463
 Good, M. L., 138
 Good, W. D., 10, 12, 16, 17
 Goodall, A. M., 59
 Goode, W. D., 224
 Goodings, J. M., 256
 Goodman, G. L., 349, 368
 Goodman, J., 297
 Goodman, L., 356, 362, 363, 366
 Goodwin, T. H., 359
 Goon, E. J., 467

- Gorbunov, B. V., 94
 Gorbunova, K. M., 464
 Gordon, A. E., 262
 Gordon, A. R., 257
 Gordon, A. S., 58, 63, 65, 67
 Gordon, George, Lord Byron, 395
 Gordon, J. E., 421
 Gordon, J. S., 9, 12
 Gordon, M., 170
 Gordon, P. K., 305
 Gordon, S., 295, 302
 Gordy, W., 34, 36, 159, 160, 161, 304, 441, 443, 466
 Gore, P. H., 355
 Goring, J. H., 42
 Gorshkov, V. I., 129
 Gorum, A. E., 415, 470
 Goryayev, M. I., 363
 Gosine, R., 356
 Gossner, K., 85
 Goton, R., 12
 Goubeau, J., 295
 Goudot, A., 361
 Gould, J. H., 360
 Goureaux, G., 93
 Gouterman, M., 349, 360, 363, 364
 Grace, R. E., 231
 Graf, P., 126
 Graham, C. D., 262, 422
 Graham, D., 77, 90
 Graham, D. M., 170
 Graham, J., 229
 Graham, R. K., 111
 Graham, R. L., 10, 11
 Graham, W. S., 5
 Grahn, R., 363
 Grammaticakis, P., 360
 Gramolin, V. A., 293
 Gränacher, J., 448
 Granath, K., 5
 Grant, G. A., 321, 360
 Grant, P. M., 442
 Graven, W. M., 461
 Gray, A. P., 262
 Gray, J. D., 343
 Gray, P., 9, 16
 Gray, T. J., 89
 Greathouse, H., 18
 Greaves, J. C., 87
 Green, D. H., 108, 317, 318
 Green, D. W., 48, 200
 Green, H. S., 274
 Green, L. G., 10, 11
 Green, N. M., 206
 Greenberg, S. A., 365
 Greene, E. F., 60, 461, 467
 Greene, E. J., 461
 Greene, F. T., 233, 465, 466, 468
 Greene, J. W., Jr., 366
 Greenhalgh, E., 84
 Greenshields, J. B., 1
 Greenwald, I., 257
 Greenwood, N. N., 6
 Greenwood, T. T., 320
 Greer, A. H., 136
 Greger, G., 86
 Gregg, S. J., 78, 80
 Gregor, H. P., 17, 134, 135
 Gregory, N. W., 10, 11, 238, 239, 462, 466
 Grelecki, C. J., 156, 161, 467
 Grenier, G., 11
 Gresham, T. L., 2, 4
 Grether, W., 35
 Greyson, J., 81
 Grieger, P. F., 265
 Griem, H., 459
 Griessbach, R., 79, 123
 Griest, E. M., 284
 Griffel, M., 10, 11
 Griffing, V., 147, 459
 Griffiths, R. C., 10
 Griffith, J. S., 336, 350, 361
 Griffiths, J. H. E., 443
 Griffiths, V. S., 262, 264
 Grigor'eva, V. V., 17
 Grimes, D. M., 9, 10
 Grimes, W. R., 220, 222, 234, 238, 277, 281
 Grimison, A., 173
 Grimley, R. T., 10, 11
 Grimmeiss, H., 133
 Grishina, N. S., 458
 Grison, E., 46
 Grönlund, F., 89, 421
 Gronvold, F., 9, 228
 Grocock, J. M., 303
 Groot, M. S. de, 170
 Gross, M. E., 12
 Gross, P., 10, 468
 Gross, P. M., 281
 Grosse, A. V., 459
 Grossweiner, L. I., 466
 Gruber, H., 80
 Gruen, D. M., 126, 467
 Gruen, L., 211
 Grumez, M., 359
 Grün, F., 265
 Gruntfest, I. J., 464
 Grunwald, E., 8, 258, 282
 Gruver, J. T., 11, 65, 68
 Grzybowski, A. K., 9, 13, 14, 17
 Guenther, W. B., 60
 Guggenheim, E. A., 92, 248, 257, 279
 Guillet, J. E., 106, 107
 Guinier, A., 276, 426
 Gulbransen, E. A., 424, 464
 Gundry, H. A., 12
 Gunn, S. R., 10, 11
 Gunning, H. E., 64
 Gunthard, H. H., 14, 447
 Günther, K. G., 93, 260, 463
 Gupta, A. K. S., see Sen
 Gupta, A. K.
 Gupta, S. R., 253
 Gurnee, E., 345
 Gurney, R. W., 255, 260
 Gurvich, L. V., 461, 467
 Gush, H. P., 398
 Gutfreund, H., 6, 206
 Gutman, F., 367
 Gutowsky, H. S., 342, 363, 440, 443, 449
 Gutstein, N., 361
 Guy, J., 332, 333, 335
 Gwathmey, A. T., 85, 464
 Gwinn, J. A., 281
 Györgyi, A. S., see Szent-Györgyi, A.
 H
 Haas, H. C., 109, 111
 Haase, R., 251, 261
 Habart, M. H., see Hubert-Habart, M.
 Haber, R. G., 170
 Haberditzl, W., 15, 361
 Habgood, H. W., 92
 Hachihama, Y., 108
 Hackerman, N., 78
 Hadler, E., 45, 46
 Hadwick, T., 177
 Haefling, J. F., 9
 Haga, E., 248
 Hagberg, O., 228
 Hagerman, D. C., 461
 Hahn, G., 136
 Hahn, W., 107
 Haines, H. R., 230
 Haines, R. M., 112
 Haissinsky, M., 289, 292, 296, 299, 305
 Halász, I., 78, 80
 Halevi, L. A., 175
 Halford, D., 449
 Halford, R. S., 389, 398
 Halim, F. M. A., 260
 Hall, A. C., 78
 Hall, D., 303, 304
 Hall, E. H., 10
 Hall, F. P., 230
 Hall, H. T., 460, 470
 Hall, J. A., 458
 Hall, T. C., 93
 Hall, W. K., 85, 227
 Halla, F., 257
 Hallam, H. E., 282
 Halsey, G. D., Jr., 79, 277, 281
 Halteman, E. K., 227
 Ham, F. S., 418
 Ham, J. S., 368
 Ham, N. S., 352
 Hamamura, T., 464
 Hamashima, M., 301

- Hambly, A. N., 363
 Hamdani, A. J., 361
 Hameka, H. F., 335, 358, 364, 447
 Hamill, W. H., 291
 Hamilton, D. R., 467
 Hamilton, J. F., 416
 Hamilton, P. B., 138
 Hamm, F. A., 416
 Hammer, E., 13, 15, 16
 Hammett, L. P., 128
 Hammond, L. W., 284
 Hampton, M. G., 81
 Hanack, M., 170
 Hanak, J. J., 237
 Hancock, J. E. H., 352
 Handler, G. S., 352
 Hanlan, J. F., 81
 Hannan, R. B., Jr., 360
 Hanngren, A., 290
 Hanrahan, A., 14
 Hansen, B. B., 276
 Hansen, C. F., 8, 469
 Hansen, M., 225
 Hansen, W. N., 10
 Hansen-Nygaard, L., 33, 34, 35, 358
 Haraldsen, H., 228
 Harbottle, G., 303
 Harden, G. D., 59
 Harding, G. N., 461
 Harding, J. T., 150, 441
 Hardy, F. R. F., 71
 Hardy, R., 319
 Hare, W. F. J., 397, 398
 Harell, J. R., 302
 Hargitay, B., 196
 Harker, H., 443
 Harkins, W. D., 155
 Harman, A. W., 10, 11
 Harmon, D. J., 312
 Harmon, K. M., 369
 Harned, H. S., 256, 257, 258, 265
 Harper, J., 420
 Harper, R. C., Jr., 8, 9
 Harrand, M., 466
 Harrington, R., 305
 Harrington, W. F., 197, 198, 206, 210, 212
 Harris, G. S., 9
 Harris, M. M., 169
 Harris, M. R., 79
 Harris, R. E., 81
 Harrison, L. G., 418
 Harshbarger, F., 39
 Hart, E. J., 292, 295
 Hart, E. W., 284, 419
 Hart, R., 115
 Hart, R. W., 361
 Harteck, P., 55, 61, 146, 149, 158, 291
 Hartley, H., 263
 Hartley, K., 5
 Hartmann, F., 446
 Hartmann, H., 368
 Harvey, K. B., 153, 155, 158, 393, 395
 Haser, L., 145
 Hashimoto, H., 463, 467
 Hashman, J. S., 154, 155, 158, 162
 Hasino, T., 359
 Hass, D., 261
 Hass, G., 94
 Hassel, O., 40, 41, 42, 368
 Hassler, A., 139
 Hassner, A., 357
 Hasted, J. B., 252
 Hastings, G. W., 113, 115
 Hastings, S. H., 368
 Hata, N., 358
 Hathaway, B. J., 9, 238
 Hattwig, H., 179, 260
 Haucher, C. W., 135, 136
 Hauenstein, J. D., 211
 Hauffe, K., 85, 424, 464
 Haugh, J. F., 60
 Haul, R., 419
 Haul, R. A. W., 92
 Hauptman, H., 47
 Hausser, K. H., 368, 439
 Havemann, R., 15, 361
 Haven, Y., 417
 Havens, G. G., 332
 Havlik, A. J., 357
 Haworth, H. W., 173
 Hawthorne, M. F., 174
 Haydel, C. H., 18
 Hayek, E., 125
 Hayes, E. T., 470
 Hayes, W., 413, 444, 445
 Hayman, C., 10
 Hays, H. F., 224
 Hazel, J. F., 298
 Head, A. J., 127
 Heal, H. G., 303, 426
 Heald, M. A., 147, 148
 Hearn, C., 355
 Heastie, R., 277
 Heath, D. F., 400
 Heckman, R. C., 366
 Hedberg, K., 33, 355
 Hedberg, L., 33, 355
 Hedges, R. M., 353
 Heer, C. V., 413
 Heffernan, M. L., 359
 Heil, M., 469
 Heilbronner, E., 18, 357, 358, 362, 363
 Heiligman, R., 363
 Heine, K., 108, 318
 Helfferich, F., 123, 132, 133
 Heller, C. A., 58, 63, 67
 Hellin, M., 177
 Hellwig, E., 8
 Helmholtz, H. von, 405
 Hemmings, R. F., 461
 Hems, G., 299
 Hems, R., 6
 Henderson, D. E., 118
 Henderson, J. R., 365
 Henglein, A., 108, 116, 302, 315, 318
 Hennig, G. R., 427
 Henrich, G., 87
 Henschke, E. B., 428
 Hepler, L. G., 9, 10, 11
 Herasymenko, P., 223, 235
 Herk, L., 54
 Herman, F., 409
 Herman, R., 10, 396, 459
 Hermann, K. W., 458
 Hermans, J. J., 280
 Hermans, J., Jr., 193
 Herrington, E. F. G., 12, 15, 16, 17, 18
 Herrington, K., 88
 Herriott, R. M., 207
 Herron, J. H., 154
 Herron, J. T., 55, 149, 151, 156, 157
 Herschbach, D. R., 37, 396, 404, 405, 462
 Hertzberg, A., 467
 Hervé, J., 439
 Herwig, W., 369
 Herzberg, G., 146, 349, 465
 Herzfeld, C. M., 151, 153, 459
 Herzfeld, K. F., 54
 Hetzer, H. B., 18
 Hexter, R. M., 389-408; 403, 404
 Heylen, A. E. D., 355
 Heyns, K., 176
 Hickmott, T. W., 82, 83, 91
 Hicks, J. A., 115
 Hiebert, G. L., 402
 Hiester, N. K., 458
 Higgins, H. C. L., see Longuet-Higgins, H. C.
 Higgins, I. R., 135, 136
 Higuchi, J., 344
 Hijmans, J., 280
 Hikata, A., 417
 Hildebrand, J. H., 40, 278, 279, 281
 Hildenbrand, D. L., 8, 14, 16
 Hildebrandt, V. D., 220
 Hill, A. V., 6
 Hill, D. C., 419
 Hill, R., 117
 Hill, R. A. W., 423
 Hill, R. M., 94
 Hill, T. L., 77, 193, 202, 361
 Hiller, L. A., Jr., 54
 Hillert, M., 220
 Hilliard, J. E., 92
 Hills, G. J., 133, 134, 253
 Hills, M. E., 413
 Hills, R. F., 230
 Hilsenrath, J., 469
 Himpan, J., 8, 9
 Hindmarch, P., 464

- Hine, J., 173
 Hines, T., 448
 Hinshelwood, C., 59
 Hintermann, H. E., 94
 Hirota, E., 36, 37, 46
 Hirota, K., 90, 91, 362
 Hirsch, E., 264
 Hirsch, P. B., 415, 416
 Hirschfeld, F. L., 45
 Hirschfelder, J. O., 1, 461
 Hirschlaff, E., 393
 Hirschwald, W., 469
 Hirshberg, Y., 363, 440
 Hirshon, J. M., 235
 Hirst, R. G., 226
 Hirt, R. C., 358
 Hirth, J. P., 463
 Hiss, Y., 86
 Hitchcock, D. L., 15, 253
 Hitzemann, G., 8
 Hjalmar, I. F., see Fischer-Hjalmar, I.
 Hoare, F. E., 12
 Hoare, J. P., 278
 Hobart, J., 447
 Hoch, H., 237, 238
 Hoch, M., 10
 Hochanadel, C. J., 293
 Hodek, J., 81
 Hodges, S. E., 365
 Hodgkin, D. C., 48
 Hodgso, W. G., 159, 161
 Hoecker, F. E., 321
 Hoefling, J. F., 237
 Hoefnagel, M. A., 356
 Hoell, P. C., 446
 Hoenig, S., 458
 Hoering, T., 138
 Hoerni, J. A., 45
 Hoeschele, G. K., 17
 Hoffman, H., 459
 Hoffman, R. A., 447
 Hoffman, R. E., 284, 418
 Hoffman, W., 365
 Hoffmann, E., 361
 Hoffmann, E. G., 282
 Hoffmeister, W., 302
 Hofstra, A., 10, 18, 171
 Hofstra, H., 362
 Hogan, V. D., 294, 321
 Hogarth, C. A., 415
 Hoger, H., 18
 Högfeldt, E., 128, 129
 Hogg, M. A. P., 158
 Høijtkink, G. J., 171, 339, 353, 354, 362, 436
 Hokyna, J., 177
 Holcomb, D. F., 448
 Holde, K. E. v., 106, 114
 Holiday, E. R., 212
 Hollas, J. M., 364
 Holleman, T., 279
 Hollingworth, B. R., 18, 212
 Hollis, D. P., 447
 Holloway, W. W., Jr., 447
 Holm, C. H., 354, 448
 Holm, R. H., 369, 448
 Holmes, D. K., 425
 Holmes, F. H., 360
 Holmes, J. M., 79
 Holmes, R. R., 5, 263
 Holmes, W. S., 4
 Holser, W. T., 8
 Holt, A. S., 361
 Holtzberg, F., 231
 Holtzer, A. M., 196
 Hölzl, F., 262
 Hölzl, J., 9
 Homjakov, K. G., 11
 Honerjäger, R., 435
 Honig, A., 34, 466
 Honig, J. M., 77-102
 Honig, R. E., 221, 237, 429, 465
 Honnen, L. R., 369
 Honsaker, J., 461
 Hood, G. C., 16, 259, 447
 Hookway, H. T., 128
 Hooge, F. N., 396
 Hopkins, L., 360
 Horai, K., 444
 Horák, M., 354
 Horbe, R., 462, 469
 Hordvik, A., 45, 46
 Horie, T., 462
 Horiuchi, J., 84, 85
 Hörli, E., 146, 150, 151, 152, 153
 Horne, R. A., 131, 252
 Horner, P. J., 293, 299
 Hornig, A. W., 444
 Hornig, D. F., 399, 400, 402, 403, 460, 461
 Hornig, J. F., 351
 Horowitz, R. H., 4, 5
 Horowitz, R. M., 359
 Horsley, G. W., 226
 Horval, R., 365
 Hoshimo, S., 9, 10
 Hossenlopp, I. A., 14, 16
 Houser, T. J., 60
 Houtz, R. C., 104
 Hove, L. van, 410
 Howard, C. S., 63
 Howard, E., 466
 Howard, J. R., 253
 Howard, K. S., 284
 Howard, R. E., 412
 Howe, J. A., 359
 Howell, H., 18
 Howell, L. J., 221, 222, 234, 235, 466
 Howell, S., 458
 Hrenoff, M. K., 363
 Hrostowski, H. J., 448
 Huang, T.-J., 359
 Hubbard, P. S., 449
 Hubbard, R., 360, 362
 Hubbard, W. N., 12, 14, 16, 17
 Huber, W., 293, 351, 354, 359
 Hubert-Habart, M., 366
 Hüchel, E., 353
 Hüchel, W., 170, 351
 Hudda, F. G., 83, 91
 Hudson, D. E., 470
 Hudson, R. G., 222, 237, 238, 470
 Hudson, R. L., 9, 157, 158, 161
 Huet, P., 93
 Hufford, D. L., 104
 Huggins, M. L., 103, 118
 Hughes, E. D., 172, 178, 179, 180, 259
 Hughes, G., 292, 293, 295
 Hughes, T. P., 461
 Hughes, V. W., 147, 155
 Huld, L., 459
 Hulm, J. K., 91
 Hultgren, G. O., 280
 Hultgren, N., 466
 Hultgren, R., 9, 223, 277, 470
 Hume, D. N., 256
 Hume-Rothery, W., 228
 Hummel, F. A., 231
 Hunsberger, I. M., 440
 Hunsberger, M., 363
 Hunt, H., 14, 15, 18
 Hunt, J. L., 397
 Hunter, R. S., 94
 Huntington, H. B., 277
 Hurd, C. O., 8
 Hurley, A. C., 344, 353
 Hurley, G. F., 16, 17
 Hurst, R. P., 343, 344
 Hurzeler, H., 362, 392
 Husband, L. J. B., 470
 Hutchinson, F., 292, 293
 Hutchison, C. A., Jr., 364, 392, 439, 444, 449
 Hutschneker, K., 127
 Huzinaga, S., 343, 359
 Hvidt, A., 197, 212
 Hvorslef, J., 40, 41
 Hyman, H. H., 177, 356, 362
 Hyne, J. B., 12, 14, 448

 I
 Ibers, J. A., 43, 45, 350, 448
 Ichige, K., 92
 Ichimiya, T., 313
 Ichishima, I., 389
 Ichishima, J., 37
 Idelson, M., 362
 Iguchi, K., 357
 Iida, S., 9
 Ikornikov, N. Y., 468
 Ilceto, A., 184
 Ilarionov, V. V., 237
 Illuminati, G., 358
 Imahori, K., 196, 197
 Imai, I., 93
 Imai, K., 355

Imoto, H., 105
 Imoto, M., 108
 Indelli, A., 256
 Inghram, M. G., 9, 10,
 237, 238, 362, 392, 463,
 465, 466
 Ingold, C. K., 172, 178,
 179, 180, 259, 350, 390,
 391
 Ingold, K. U., 158
 Ingraham, L. L., 357
 Ingram, D. J. E., 145,
 146, 159, 160, 161, 169,
 361, 392, 435, 439, 440,
 441, 442, 443
 Ingram, V. M., 48, 200
 Inhoffen, H. H., 361
 Innes, K. K., 253
 Inokuti, M., 309
 Inoue, T., 9
 Inscoe, M. N., 360
 Inskæp, R. G., 15
 Insley, H., 234, 238
 Ioan, V., 179
 Iofa, B. Z., 9
 Ipat'ev, V. V., 464
 Ireton, H. J. C., 149, 152
 Irmscher, I., 361
 Irvine, J. W., Jr., 137
 Irving, J. H., 282
 Isenberg, I., 366
 Isensee, R. W., 15
 Ishida, S., 362
 Ishiguro, E., 332, 333, 447
 Ishiguro, K., 93
 Isirikyan, A. A., 80, 81, 89
 Ito, E., 361
 Ito, K., 447
 Ito, T., 463
 Itoh, J., 443, 447, 448,
 449
 Itoh, R., 361, 367
 Itoh, T., 334
 Ifterbeek, A. van, 8, 93
 Ivanova, E. F., 257
 Ivanov, M. I., 9, 10
 Ivanova, V. N., 357
 Ivantsov, V. P., 468
 Iverson, M., 467
 Ives, D. J. G., 253
 Ivin, K. J., 4, 5, 16, 18
 Iwakami, Y., 78
 Iwaki, R., 365
 Iyengar, P. K., 410
 Izmailov, N. A., 136, 257,
 258
 Izmailova, D. R., 128
 Izmail'skil, V. A., 368

J

Jaccarino, V., 448
 Jackman, L. M., 5, 358,
 447
 Jackson, C., 443
 Jackson, D. S., 148, 149
 Jackson, J. L., 145, 146,

147, 151, 276, 280
 Jackson, L. C., 8
 Jacob, E. E., 361
 Jacobs, P. W. M., 222
 Jacrot, B., 411
 Jaenicke, W., 424
 Jaffé, H. H., 176, 360
 Jaffee, R. I., 464
 Jagow, R. H., 175
 Jakubovic, A. O., 133, 134
 James, D. G. L., 62, 63,
 66
 Jamieson, J. W. S., 61
 Jander, G., 259, 260
 Janetzko, W., 4
 Janjic, D., 179
 Janssen, R., 360
 Jansson, H. J., 18
 Janz, G. J., 1, 11, 14, 17
 Jarboe, C. H., 302
 Jarrett, H. S., 338, 444
 Jayko, M. E., 298
 Jeffries, C. D., 445
 Jefimenko, O., 281
 Jellinck, P. H., 290
 Jen, C. K., 147, 148, 150,
 155, 158, 160, 161, 440,
 441, 442
 Jenkin, D. G., 31
 Jenkins, A. D., 103, 117
 Jenkins, A. E., 464
 Jennen, J. J., 354
 Jennings, D. A., 449
 Jennings, K. R., 148
 Jenny, E. F., 169, 172
 Jensen, C. A., 125
 Jensen, F. R., 178, 179
 Jere, G. V., 9
 Jessey, M. E., 458
 Jessup, R. S., 5
 Jeunehomme, M., 60, 66
 Jirgensons, B., 362
 Jirů, P., 79
 Johnson, B. W., see
 Willman-Johnson, B.
 Johnson, C. E., Jr., 354,
 447
 Johnson, E. R., 303
 Johnson, G. R. A., 296
 Johnson, J. R., 232
 Johnson, K. D. B., 280
 Johnson, O. H., 184
 Johnson, P., 206
 Johnson, R. G., 470
 Johnson, R. R., 175
 Johnson, W. H., 4, 10
 Johnston, H. L., 10, 89,
 237
 Johnston, H. S., 55
 Johnston, W. G., 416, 426
 Jolley, J. E., 281
 Jones, A. R., 304
 Jones, D. A., 413, 445
 Jones, E. R., 284
 Jones, G., 261, 262
 Jones, G. O., 8
 Jones, G. W., 461

Jones, J. R., 172, 261
 Jones, L. H., 282
 Jones, M. H., 107
 Jones, M. M., 253
 Jones, R., 45, 448
 Jones, R. A., 158
 Jones, R. M., 227
 Jones, R. O., 232
 Jones, T. O., 304, 423
 Jones, W. F. K. W., see
 Wynne-Jones, W. F. K.
 Jonker, G. H., 231
 Joos, G., 369
 Jordan, E., 170
 Jordan, R. D., 161
 Jørgensen, C. K., 368
 Jørgensen, P. J., 464
 Jørgenson, M. J., 359
 Joshi, D. P., 260
 Joshi, S. S., 260
 Josien, M. L., 282
 Jost, W., 9
 Jousot-Dubien, J., 366
 Joy, H. W., 343
 Judd, B. R., 444
 Juliš, J., 81
 Jumper, C. F., 130
 Junghänel, G., 361
 Jura, G., 81, 94
 Jurd, L., 359
 Jursa, A. S., 149, 355
 Just, D., 419
 Juza, E., 10

K

Kaas, T. M., see Munthe-
 Kaas, T.
 Kabakchi, A. M., 293
 Kabadi, M. B., 333
 Kabayama, M. A., 12, 14,
 15, 18
 Kachinskaya, O. N., 16
 Kachkurova, I. J., 301
 Kadelbach, H., 467
 Kahane-Pailous, J., 366
 Kahlenberg, F., 10
 Kahlweit, M., 265
 Kahn, M., 63
 Kaizerman, S., 109
 Kalant, H., 361
 Kalashnikov, Ya. A., 460
 Kale, M. N., 59
 Kalinkina, I. N., 9
 Kallman, S., 138
 Kallmann, H., 365
 Kaltenecker, W., 359
 Kamath, P. M., 109
 Kamiya, I., 365
 Kamkina, L. S., 12, 15, 16,
 17
 Kämpf, G., 78, 91
 Kanda, F. A., 226, 277
 Kanda, Y., 364
 Kandyba, V. V., 458
 Kane, B. J., 360
 Kanter, M. A., 418

AUTHOR INDEX

501

- Kanykovskii, R. T., 8, 9, 11
 Kanzaki, H., 414
 Känzig, W., 413
 Kapetanidis, L., 253
 Kaplan, J. I., 448
 Kaplan, L., 173
 Kaplan, L. H., 44
 Kapustinskii, A. F., 8, 9, 11
 Karagounis, G., 91
 Karasev, B. V., 236, 237
 Karasz, F. E., 281
 Kargin, V. A., 116, 117
 Karle, I. L., 37, 47
 Karle, J., 37, 47
 Karler, R., 366
 Karlin, R. E., 111
 Karlson, R. H., 196, 362
 Karplus, M., 342
 Karpov, A. N., 138
 Karpov, V. L., 312
 Karr, H., 461
 Karreman, G., 366
 Kartasheva, L. I., 302
 Kartzmark, E. M., 262
 Karum, S. M., 284
 Karush, F., 205, 213
 Karyakin, A. V., 358
 Kasal, P. H., 34
 Kasha, L., 349
 Kasha, M., 349, 354, 364, 365, 366, 367
 Kasper, J. S., 227
 Kasper, K., 364
 Kastler, A., 446
 Katchalski, E., 192, 198
 Kates, D. F., 354
 Katnack, F. L., 231
 Katorski, A., 404
 Katritzky, A. R., 358
 Katsura, S., 275
 Katzin, L. I., 369
 Kaufman, F., 55, 61, 149, 154
 Kaufman, J. V. R., 303
 Kaufman, S., 461
 Kaufmann, A., 229
 Kautsky, H., 79
 Kauzmann, W., 191, 192, 196, 350
 Kaverin, S. V., 43
 Kavtaradze, N. N., 83, 84
 Kay, A. E., 9
 Kay, E., 11, 238, 239
 Kay, W. B., 16, 17
 Kayama, K., 349, 352
 Kazakova, V. M., 369
 Kazas, T. S., 17
 Kazimirova, N., 10
 Kazusa, Y., 355
 Kearns, D., 367
 Keck, J. C., 54
 Kedzie, R. W., 445
 Keefer, E. H., 16
 Keefer, R. M., 15, 18
 Keilty, M. C., 161
 Keesom, W. H., 147, 149, 152
 Keeler, N. P., 86
 Keisman, R. A., 366
 Keizer, C. R., 158
 Kekule, A., 185
 Kelbg, G., 247
 Keller, D. V., 226, 277
 Keller, S. P., 444
 Kelley, R., 149
 Kelley, R. J., 461
 Kellher, J. M., 15
 Kellogg, H. H., 221, 222, 234, 235, 466
 Kelly, J. W., 360
 Kelso, J. R., 149, 154
 Kember, N. F., 127, 130
 Kemp, W., 352
 Kempter, C. P., 470
 Kendall, W. B., 470
 Kendrew, J. C., 48, 191, 192, 200
 Kendrick, L. W., Jr., 181
 Keneshea, F. J., Jr., 10, 222, 238
 Kennard, O., 31, 361
 Kennedy, D. R., 83
 Kennedy, G. C., 8, 469
 Kennedy, J., 127
 Kennedy, R. E., 461
 Kennedy, R. M., 38, 39
 Kenney, M. J., 470
 Kenwright, R., 70
 Kenyon, W. O., 5
 Kerimov, A. M., 8
 Kerker, M., 257
 Kermov, A. M., 8
 Kerr, J. A., 58
 Kertesz, Z. I., 313
 Ketelaar, J. A. A., 281, 396, 398, 399
 Ketkovich, V. Y., 468
 Ketskemeti, L., 365, 366
 Keywell, F., 427
 Khan, N. H., 361
 Khanolkar, D. D., 356
 Kharasch, M. S., 301
 Kharasch, N., 357
 Khenokh, M. A., 297
 Khitarov, N. I., 460, 468
 Khlebnikova, V. N., 9, 469
 Khokhlov, L. K., 468
 Khokhlov, S. F., 467
 Khorano, H. G., 138
 Kianpour, A., 4, 5
 Kielland, J., 256
 Kierstead, R. W., 357
 Kiese, N. H., 465
 Kikindai, M., 263
 Kikuchi, C., 444
 Kikuchi, K., 355
 Kilb, R. W., 37, 405
 Kilpatrick, J. E., 38, 39
 Kilpatrick, M., 177, 356, 362
 Kim, P. H., 448
 Kimball, G. E., 345
 Kimura, K., 137
 Kinell, P. O., 5
 King, A. J., 226, 277
 King, B. W., 469
 King, E. G., 9, 10
 King, E. J., 18
 King, E. L., 10
 King, G. W., 359, 364, 391
 King, J., 449
 King, M. B., 280
 King, R. L., 392
 King, T. P., 192
 King, W. T., 399
 Kingery, W. D., 419, 470
 Kini, K. A., 79
 Kiperman, S. L., 84
 Kirby, P., 264
 Kircher, H., 79
 Kircher, J. F., 291
 Kirillin, V. A., 8
 Kirkbride, B. J., 259
 Kirkpatrick, M. E., 230
 Kirkwood, J. G., 197, 202, 248, 273, 282, 349, 350, 362, 469
 Kirsch, H., 79
 Kirshenbaum, A. D., 459
 Kiselev, A. V., 78, 79, 80, 81, 84, 91
 Kiselev, V. G., 291
 Kisel'nikov, V. N., 17
 Kisliuk, P., 87
 Kiss, A., 368, 369
 Kiss, Z. J., 398
 Kistemaker, J., 428
 Kistiakowsky, G. B., 2, 3, 4, 5, 56, 58, 61, 69, 149, 394
 Kita, H., 84, 85
 Kitai, R., 192, 199, 211
 Kitchener, J. A., 133, 134, 222
 Kittel, C., 409
 Kitzinger, C., 3, 7, 207
 Kiukkola, K., 221
 Kiusch, P., 221, 238
 Kivelson, D., 447, 448
 Kivelson, M. G., 447
 Kjöllesdal, H., 424
 Klabunde, C. E., 425
 Klabunovskii, Ye. I., 17
 Klassen, N. V., 61
 Kleeberg, W., 177
 Klein, H. M., 221, 236, 238, 463, 465
 Klein, J. D., 470
 Klein, J. J., 61, 461
 Klein, M. P., 439
 Klein, R., 146, 423
 Klemchuk, P. P., 174, 175
 Klemm, W., 226
 Klemperer, D. F., 83, 85
 Klemperer, E., 196, 197
 Klemperer, W., 236, 396, 462, 465, 466, 469

- Klepfer, H. H., 229, 467
 Kleppa, O. J., 219
 Klerk, A. D. -de, see Dammers-de-Klerk, A.
 Klick, C. C., 414
 Klimova, Z. V., 131
 Kline, D. E., 307
 Klochikin, A. A., 355
 Klopp, W. D., 464
 Klotz, I. M., 205, 211
 Knacke, O., 462, 463, 469
 Knapp, W. J., 233
 Knau, H., 367
 Knee, J. E. C., 175
 Knewstubb, P. F., 461
 Knight, H. T., 9
 Knight, W. L., 8
 Knopoff, L., 8
 Knox, J. H., 56, 69, 71
 Knox, L. H., 4
 Kobe, K. A., 1
 Koch, H. P., 349
 Kockelberg, G., 110
 Koefoed, J., 280
 Koehler, J. B., 425
 Koehler, J. K., 8
 Koehler, J. S., 425
 Koenig, V. L., 298
 Koepf, H.-M., 252
 Kofstad, P., 424, 464
 Kogan, S. M., 83, 86
 Kohl, A., 227
 Kohlschütter, H. W., 78, 91
 Köhnlein, E., 62
 Koide, S., 332, 333
 Kojima, T., 38, 39
 Kokes, R. J., 84
 Kokhlov, M. Z., 459
 Kokoski, C. J., 366
 Kokoski, R. J., 366
 Kokubun, H., 359, 367
 Kolb, A. C., 460
 Kolboe, S., 357
 Kolditz, L., 261
 Kolobkov, V. P., 365
 Kolos, W., 352, 368
 Koloušek, J., 298
 Kolsky, H. G., 469
 Komaki, C., 37
 Komarek, K., 235
 Komatsu, K., 9
 Kommandeur, J., 367
 Kon, H., 362
 Kondo, M., 259, 260
 Kondratiev, V. N., 53
 König, E., 360, 364
 Konigsberg, W., 192
 Koonce, S. E., 463
 Kooyman, E. C., 60
 Kopolodova, J., 298
 Kopsch, H., 467
 Kor, S. K., 265
 Korinek, G. J., 367
 Korneeva, I. V., 8
 Korobov, V. V., 461
 Körösy, F., 362
 Kortanyan, K. A., 470
 Kortüm, 169, 279, 363
 Koschel, D., 128, 133
 Kosiba, W., 427
 Koskikallio, J., 15
 Kosower, E. M., 363, 368
 Kostantinov, A. A., 467
 Kostkowski, H. J., 459
 Kostryukov, V. N., 9, 10, 12
 Kot, A. A., 468
 Kotani, M., 349, 352
 Koulkès-Pujo, A. M., 295
 Koutecký, J., 82, 92
 Kovalevskii, V. A., 458
 Kovarskaya, B., 116, 117
 Kozakakevitch, P., 470
 Kozina, M. P., 12, 15, 16, 17
 Kozmanov, Yu. D., 464
 Kozyrev, B. M., 439
 Kraczkiewicz, T., 356
 Kramer, G. M., 8
 Kramer, W. R., 8, 14, 16
 Kranendonk, J. van, 396, 397, 398, 400, 401
 Krauch, H., 360
 Kraus, C. A., 249, 255, 259, 261
 Kraus, J. W., 58, 63
 Kraus, K. A., 124, 130
 Krause, J. T., 251
 Krauss, M., 153, 344
 Kraut, J., 200
 Krawczynski, St., 86
 Krawetz, A. A., 259
 Kreevoy, M. M., 353
 Krentsel, B. A., 12, 16
 Kresge, A. J., 175
 Kreshkov, A. P., 138, 355
 Krieger, H., 359
 Krier, C. A., 226
 Krisher, L. C., 37
 Krivoglas, M. A., 410
 Kroepelin, H., 467, 469
 Krüger, C., 4
 Kroger, F. A., 411
 Kroh, J., 8
 Kromhout, R., 361
 Kron, G., 458
 Krongauz, V. A., 300
 Kronman, M. J., 206
 Kropf, A., 360, 362
 Krüger, G., 89
 Kruglov, R. N., 176
 Kruh, R., 470
 Kruizinga, J. H., 362
 Krumhansl, J. A., 9
 Krumholz, P., 251
 Krusemeyer, H. J., 82
 Kruuse, G., 232
 Kubaschewski, O., 277, 464
 Kubba, V. P., 357, 358
 Kubo, M., 259, 260
 Kubota, T., 358, 363
 Kuboyama, A., 359
 Kuchitsu, K., 37, 39, 43, 400
 Kuczynski, G. C., 420
 Kuentzel, L. E., 146
 Kuhn, D. W., 10, 238
 Kuhn, H., 350, 351, 354, 359
 Kuhn, L. P., 357, 363
 Kuhn, W., 350
 Kuiper, G. P., 459
 Kullnig, R. K., 170, 447
 Kümme, U., 94
 Kumler, W. D., 170, 447
 Kunin, R., 123
 Kunitomi, M., 468
 Kupka, F., 126
 Kupletskaya, N. B., 360
 Kuratani, K., 37
 Kurdjomova, R. N., 43
 Kuri, Z., 64
 Kurimura, Y., 137
 Kurkjian, C. R., 470
 Kurkhi, G. A., 467
 Kurosawa, T., 411
 Kursanov, D. N., 171
 Kurti, N., 10, 459
 Kurtz, J., 198
 Kurzweg, U. H., 148
 Kusano, K., 12, 15
 Kusan, P., 221, 236, 238, 463
 Kushida, T., 459
 Kutschke, K. O., 62, 63, 67
 Kutsev, V. S., 10
 Kuwata, K., 362
 Kuylenstierna, U., 232
 Kuzminskii, A. S., 312
 Kuznetsov, G. N., 43, 236
 Kuznetsova, I. K., 356
 Kuznetsova, N. P., 130
 Kwan, T., 83, 85
 Kwart, H., 177
 Kwart, K. H., 112
 Kwestroo, W., 231

L

- la Banda, J. F. G. de, see García de la Banda, J. F.
 Labhart, H., 359, 435
 Lachavanne, A., 179
 Lacher, J. R., 4, 5, 66
 Lachman, J. C., 458
 Lacombe, P., 420
 Lacroix, R., 446, 464
 Ladbury, J. W., 169
 Ladd, J. A., 3
 Ladd, M. F. C., 258
 Laet, W. de, 8
 Lafleur, S., 275
 Lafuente, B., 321
 Lagrange, G., 139
 Lagunov, M. D., 259
 Lahiri, A., 79
 Laidler, K. J., 5, 7, 11, 12, 14, 15, 17, 80, 259, 290

- Laine, N., 447
 Laitinen, H. A., 470
 Lalit, R. W., 467
 Lakatos, B., 352
 Lake, P. E., 256
 Lakhanpal, M. L., 88
 Lakner, J. F., 460
 Lalos, G. T., 458
 la Mare, P. B. D. de, see
 Mare, P. B. D. de la
 Lamb, J., 170
 Lamb, W. E., 335
 Lambert, M., 426
 Lambertson, W. A., 464
 La Mer, V. K., 92
 Lampe, F. W., 289, 290
 Landau, B. S., 234, 238
 Landau, L., 193
 Lander, J. J., 429
 Landesman, A., 449
 Landmann, W., 298
 Landsberg, P. T., 423
 Lane, E. S., 127
 Lang, A. A., 233
 Lang, K. L., see Linder-
 ström-Lang, K.
 Láng, L., 357
 Langberg, E., 428
 Langford, C. T., 138
 Langmuir, I., 146
 Langrish, J., 56
 Langseth, A., 36, 43
 Lapanje, S., 129
 Lapina, L. M., 237
 Lapinskaya, E. M., 297
 Lapinski, R., 183
 Larin, V. A., 298
 laRoch, R. I., 12, 14, 17
 Laroche, J., 87
 Larssen, P. A., 45, 46
 Lasater, J. A., 90, 449
 Lascombe, J., 282
 Lashkarev, V. E., 42
 Laskowski, M., Jr., 6, 193,
 201, 203, 204, 205, 206,
 207, 208, 209, 211, 212,
 361
 Laszlo, T. S., 459
 Latimer, W. M., 251
 Latorre, C., 11, 12, 14, 15,
 17
 Laudise, R. A., 468
 Lauer, W. M., 363
 Laufer, V. M., 127, 128,
 137
 Laughton, P. M., 173
 Launay, J., 93
 Laurensen, I. J., 448
 Laurie, C. M., 57
 Laurie, V. W., 36, 37, 38,
 39
 Lauterbur, P. C., 448
 Laville, G., 3, 7
 Lavin, G. I., 158
 Lavine, M. C., 94
 Lavorel, J., 360
 Law, J. T., 84, 88, 423,
 464
 Lawler, C. W., 280
 Lawrence, K. S., 264
 Lawrenson, I. J., 355
 Lax, B., 409
 Lax, M., 276
 Lazarus, D., 284
 Lea, K., 5
 Leach, S., 366
 Leach, S. J., 193, 197,
 198, 211, 212
 Leake, L. E., 225
 Leary, R. E., 4
 Lebedev, V. I., 222
 LeBlanc, F. J., 149, 355
 Lechtenbohrer, H., 107
 Leckie, I. R., 356
 LeClaire, A. D., 417, 418
 Lecocq, A., 8, 469
 Lecomte, C., 424
 Lederer, M., 138
 Ledwith, A., 289
 Lee, J., 447
 Lee, M. F., 468
 Lee, W. H., 258, 264
 Lees, D. J., 461
 Lefebvre, J., 254
 Lefèvre, N., 359
 Lefort, M., 289, 292, 296
 Legendre, J. M., 446
 Legge, N. R., 118
 LeGoff, P., 467
 Lei, W.-C., 353
 Leibowitz, L., 84
 Leicknam, J. P., 282
 Leifer, A., 54
 Leipziger, F. D., 260
 Leist, M., 262
 Leistikow, S., 424
 Leland, F. E., 351
 Lemieux, R. U., 170, 447
 Lemmerling, J., 464
 Lemmon, R. M., 305
 Lennox, F. G., 210
 Lenoir, C., 137
 Leonard, N. J., 359
 Leone, C. A., 298
 Lerol, G. E., 465, 466,
 468
 LeRoy, D. J., 56
 Lester, G. R., 263
 Leszko, M., 129
 Leto, J. R., 448
 Letort, M., 84
 Leung, Y. C., 48
 Levi, D. L., 10, 468
 Levin, E. M., 230, 231
 Levin, S. H., 447
 Levine, S., 249, 258
 Levinson, G. S., 360, 364
 Levitas, A., 276
 Levitt, B. P., 64
 Levitt, L. S., 361
 Levy, A., 60, 461
 Levy, H. A., 363
 Levy, M., 117, 206, 208,
 211
 Lewis, B., 146, 158
 Lewis, E. P., 148
 Lewis, E. S., 169, 174,
 175, 181
 Lewis, G. N., 145
 Lewis, L., 9, 253
 Lewis, M. S., 205
 Leymonie, C., 420
 Li, H. T., 412
 Li, N. C., 131
 Liang, H. T., 177
 Liaschenko, V. I., 85
 Libanati, C., 420
 Libby, W. F., 176
 Liberman, A. L., 356
 Libinson, R. E., 361
 Libowitz, G. G., 224, 230
 Liddel, U., 448
 Lide, D. J., 404
 Lide, D. R., 37, 38, 39
 Lidiard, A. B., 412, 415,
 418
 Lieber, E., 358
 Lieberman, H., 361
 Liebster, J., 298
 Liehr, A. D., 349, 355,
 356, 446
 Lifshitz, E., 193
 Lightfoot, E. N., 134
 Liley, B. S., 461
 Lin, C. C., 37, 405
 Lin, C.-H., 359
 Lin, R., 138
 Lind, E. L., 131
 Lind, S. C., 293
 Lindgaard-Andersen, A.,
 94
 Lindeman, L., 466
 Lindenbaum, A., 137
 Lindenbaum, S., 126
 Lindenfors, S., 18
 Lindemann, F. C. W., see
 Wirth-Lindemann, F. C.
 Linderström-Lang, K., 192,
 197, 201, 202, 203, 212
 Lindner, A., 428
 Lindqvist, L., 47
 Linevsky, M. J., 10
 Ling, F. F., 92
 Ling, R. C., 274
 Linnett, J. W., 87, 148,
 350, 368, 400
 Linschitz, H., 366
 Lipkin, D., 145
 Lippert, E., 366
 Lippert, E. L., Jr., 45
 Lippincott, E. R., 46, 54,
 351, 352
 Lipscomb, W. N., 42, 45,
 402
 Lipsky, S., 299, 300
 Liqueur, A. M., 358
 Lister, M. W., 5
 Litovitz, T. A., 265
 Littleton, M. J., 411
 Liu, C. H., 470
 Livey, D. T., 468

- Livingston, H. K., 92
 Livingston, R., 147, 148,
 159, 366, 443
 Livingston, R. L., 34, 44
 Llewellyn, D. R., 177, 181
 Llewellyn, P. M., 445, 449
 Lloyd, D. G., 300
 Loan, L. D., 104
 Loasby, R. G., 9
 Lobatshev, A. N., 42, 43
 Locke, J. L., 396, 397
 Lockhart, J. C., 18
 Loeb, G. I., 193, 199, 203,
 204, 205, 206, 211
 Loeffler, B. B., 355
 Loewenstein, A., 448
 Lofa, B. Z., 236, 237
 Loh, E., 232
 Lomakina, G. G., 13, 369
 London, F., 334
 Long, F. A., 173
 Long, L. H., 18, 57, 62
 Long, R. B., 291
 Longuet-Higgins, H. C.,
 273, 275, 283, 350, 352,
 353, 361, 363, 369, 436
 Longwell, J. P., 291
 Longwell, P. A., 460
 Loprest, F. J., 257
 Lord, N. W., 449
 Lorentzen, H. L., 276
 Lorenz, G., 458
 Lorenzelli, V., 262
 Lorigers, J., 137
 Losa, C. G., 8
 Losev, I. P., 128, 180
 Lossing, F. P., 146
 Losty, H. H. W., 470
 Lovberg, R. H., 461
 Lovelock, J. E., 290
 Low, B. W., 191, 192
 Low, M. J. D., 84
 Low, W., 444, 445, 446
 Löwdin, P. O., 343
 Lowrey, A., III, 355
 Lozier, W. W., 459
 Lu, C. S., 47
 Lubchenko, A. F., 356
 Lucchesi, P. J., 291
 Luchkin, G. P., 464
 Luck, C. F., 160, 161
 Lücke, K., 417
 Ludemann, H., 463
 Luebke, R. H., Jr., 160,
 161, 304, 423
 Luetic, P., 85, 86
 Luff, B. B., 259
 Luhman, W., 470
 Lukach, C. A., 170
 Luke, C. L., 468
 Lumme, P. O., 11, 15, 16,
 357
 Lund, E. W., 31-47; 46
 Lundberg, R. D., 197
 Lundberg, W. O., 303
 Lundy, R., 91
 Luner, C., 64
 Lunt, W., 156
 Lupinski, J. H., 369
 Lutes, O. S., 150, 154
 Lutz, E., 366
 Lutz, G. A., 136
 Lwowski, W., 169, 182
 Lydersen, A. L., 13, 15,
 16
 Lygina, I. A., 80, 81
 Lykos, P. G., 334, 354
 Lynch, V. S., 361, 367
 Lynde, E. M., 293
 Lyons, B. J., 309
 Lyons, L. E., 357, 361,
 367
 Lyubimov, A. P., 9
 Lyubittov, Y. N., 9
- M
- Maass, O., 262, 263, 264
 Mabuchi, H., 137
 McAfee, K. B., 417
 McAllister, R. A., 284
 McBeth, R. L., 369
 McBryde, W. A. E., 137
 McCabe, C. L., 222, 237,
 238, 470
 McCabe, J. C., 61
 McCain, C. C., 89
 McCarthy, R. L., 304,
 442
 McCarty, M., Jr., 156,
 158, 161, 362
 McClaine, L. A., 127
 McClanahan, E. D., 303
 McClure, D. S., 349, 350,
 357, 364, 367
 Maccoll, A., 58, 59
 McConnell, H. M., 150,
 336, 338, 339, 341, 342,
 354, 356, 368, 435, 436,
 438, 440, 441, 448
 McConnell, J. D. M., 84
 McCormick, C. G., 159,
 160, 161, 304, 441, 443
 McCullough, J. P., 12, 14,
 16
 McDermot, H. L., 78
 MacDonald, D. K. C., 226
 MacDonald, G. J. F., 460
 MacDonald, J. C. F., 397
 McDonald, L. A., 124, 126
 McDonald, R. A., 8, 14,
 16
 McDonald, R. E., 397, 398
 McDonald, R. S., 80, 91
 McDowell, C. A., 58, 63,
 65, 365
 McDuffie, H. F., 296
 McElcheran, D. E., 66
 McEwen, K. L., 356, 361
 McFadden, M. L., 211
 McGarvey, B. R., 335,
 444
 McGarvey, F. X., 123
 McGavin, S., 198
 McGee, H. A., Jr.,
 McGlashan, M. L., 278
 McGlynn, S. P., 351, 360,
 362, 367, 368
 McGowan, I. R., 70
 McGrath, J. W., 448
 McGrath, W. D., 54, 55,
 61, 154
 Mach, J. G., 461
 Machol, R. E., 8, 9, 223,
 237
 McIntosh, R., 78
 MacIver, D. S., 84
 McKay, H. A. C., 257
 McKean, D. C., 399, 400
 McKee, S., 158
 Mackenzie, J., 83
 Mackenzie, J. D., 470
 Mackenzie, K. J., 322
 Mackenzie, R. C., 92
 McKeown, P. J., 467
 McKinley, J. D., Jr., 55,
 465
 McKinley, J. J., 4, 5
 Mackle, H., 5
 Mackliet, C. A., 284, 417
 Mackor, E. L., 10, 18,
 170, 171, 354, 362, 447
 McLachlan, A. D., 340,
 353, 438, 441
 McLachlan, D., Jr., 92
 McLain, W. H., Jr., 469
 McLaren, E., 282
 MacLean, C., 171, 354,
 362, 447
 McLellan, A. G., 274
 McLennan, J. C., 145, 149,
 152
 McLeod, H. G., 257
 McMahon, P. E., 15
 McMickle, R. H., 18, 280
 McMillan, G., 68
 McMillan, W. G., 8, 77
 McMillan, W. R., 464
 McMurdie, H. F., 230
 McNabb, W. M., 298
 McNesby, J. R., 58, 65
 McQuarrie, M. C., 470
 McQuillan, A. D., 224
 McRae, E. G., 356, 360,
 363, 364
 McTaggart, C. D., 232
 McWeeny, R., 334, 337,
 354, 447
 McWhirter, R. W. P., 461
 Madan, M. P., 283
 Madaras, G. W., 5
 Maddock, A. G., 303
 Madon, H. N., 468
 Mador, I. L., 146, 157,
 160, 403
 Maeda, K., 400
 Maeda, S., 9
 Magat, M., 108, 300
 Magee, J., 345
 Magel, T., 145
 Mager, K. J., 365

- Magnan de Bornier, B., 298
 Magnéti, A., 232
 Magnuson, G. D., 425
 Mah, A. D., 10
 Mahan, B. H., 54
 Mahieu, A. M., 60
 Mahlman, H. A., 293
 Maier, M., 170
 Maier, R. H., 137
 Maimind, V. J., 171
 Maisch, W. G., 414
 Maister, H. G., 138
 Majury, T. C., 311
 Maki, A. H., 444
 Makishima, S., 127
 Malcolm, G. N., 258
 Malkin, V. I., 467
 Mallett, M. W., 224, 464
 Malloy, G. T., 464
 Malm, J. G., 8
 Mamula, L., 302
 Manabe, H., 18, 254
 Mandel, M., 34, 35, 405, 466
 Mandelkern, L., 16, 191, 194
 Mandell, E. R., 307
 Manecke, G., 123, 127
 Mangini, A., 355, 356, 363
 Mangum, B. W., 364, 392, 439
 Mann, C. D., 135
 Mann, D. E., 38, 39, 404, 466
 Mannella, G., 55, 149
 Manson, J. A., 118, 119
 Manthos, E. T., 230
 Mantoni, J. E., 60
 Marantz, S., 9
 Marble, D. T. F., 396
 Marcantonio, A. F., 366
 Marcus, E., 363
 Marcus, R. J., 252
 Marcus, Y., 131, 257
 Mardon, P. G., 230
 Mare, P. B. D. de la, 169
 Marek, N., 366
 Margerum, J. D., 366
 Margolis, L. la., 89
 Margrave, J. L., 457-86;
 9, 10, 11, 14, 236, 458,
 463, 464, 465, 466, 468,
 469, 470
 Marhenkel, H., 79
 Maricic, S., 448
 Marín, J. H., 87
 Marino, G., 358
 Marion, G. W., see
 Watelle-Marion, G.
 Mark, H., 103, 118
 Markova, N. V., 137
 Markovskii, L. Y., 470
 Marks, A. G., 137
 Markus, B., Jr., 8, 12
 Markus, G., 213
 Maroni, P., 359
 Marple, D. T. F., 459
 Marples, J. A. C., 230
 Marsh, R. E., 47, 48
 Marshall, T. W., 335, 447
 Marshall, W. L., 257, 394
 Martell, A. E., 361
 Martens, G., 60, 66
 Martin, D. F., 359
 Martin, H., 62
 Martin, J. F., 12, 15, 16,
 17, 18
 Martin, J. J., 316
 Martin, P. E., 259
 Martin, R. B., 18
 Martin, R. L., 260
 Martin, T. W., 62, 63
 Marton, L., 146
 Martynoff, M., 359
 Marx, R., 446
 Maskrey, J. T., 226
 Maslov, P. G., 555
 Mason, C. M., 257
 Mason, E. A., 8, 15, 282,
 283, 469
 Mason, J., 355, 361
 Mason, J. T., 467
 Mason, S. F., 358, 361
 Mason, S. G., 276
 Massalski, T. B., 226
 Massey, H. S. W., 333,
 344
 Masson, C. K., 225
 Massone, J., 137
 Mastagli, P., 139
 Masuda, Y., 449
 Masumi, T., 94
 Mataga, N., 358, 365, 366
 Matarrese, L. M., 444
 Matejec, R., 367
 Matell, M., 18
 Mather, J. W., 461
 Matheson, M. S., 148, 159,
 160, 304, 441, 442
 Mathews, F. C., 42
 Matrosor, E. I., 43, 236
 Matsen, F. A., 282, 343,
 344, 353, 359, 368
 Matsumae, K., 313
 Matsumoto, M., 355
 Matsumoto, N., 9, 238
 Matsunaga, Y., 87
 Matsuo, H., 307
 Matthias, B. T., 227, 448
 Mattison, M., 132
 Mattok, G. L., 297
 Mattoo, B. N., 18, 254
 Matubara, I., 359
 Matumura, O., 444
 Mauer, F. A., 146, 157
 Maurer, H.-J., 289
 Maurer, R. J., 418
 Maurin, J., 426
 May, B. Z., 361
 May, M. J., 161
 Maybury, P. C., 225
 Mayer, J. E., 248, 274
 Mayer, J. R., 4
 Maynard, G. R., 458
 Mays, J. M., 449
 Mazo, R. M., 265, 273
 Mazur, J., 54
 Mazzetti, F., 305
 Meaburn, G. M., 300
 Meador, W. R., 4
 Meakins, R. J., 412
 Meares, P., 129, 133
 Mears, W. H., 16
 Medved, D. B., 83
 Medvedev, S. S., 316
 Meer, W., 369
 Meeron, E., 248
 Meetham, A. R., 12
 Megaw, H. D., 404
 Meiboom, S., 448, 449
 Meier, W. M., 125
 Meigs, P. S., 464
 Meij, P. H. van der, 362
 Meisels, A. G., 291
 Meister, A. G., 13, 14
 Meixner, J., 265
 Melandri, M., 361
 Meleshko, V. P., 128, 129
 Mellor, J., 225
 Mellors, G. W., 470
 Melville, H. W., 107, 111,
 112, 113, 115, 116, 119,
 161, 313, 319, 442, 443
 Mendel, H., 251
 Menter, J. W., 415, 421
 Mentzer, C., 359
 Menzer, W., 9
 Merrett, F. M., 105, 118
 Merten, U., 463
 Meshitsuka, G., 300
 Messer, C. E., 225
 Messerly, J. F., 12, 14,
 16
 Metz, D. J., 107, 108, 305
 Meuch, D., 362
 Meussner, R. A., 465
 Meyer, A. J. P., 445
 Meyer, B., 9, 238, 466,
 468
 Meyer, H., 16
 Meyer, L., 77, 90, 421,
 463
 Meyer, R. T., 9
 Meyerson, S., 362
 Michel, L., 4, 5
 Mickle, E. A., 145
 Miduno, Z., 444
 Mignolet, J. C. P., 83, 88
 Mihama, K., 228, 463
 Mikhailenko, Yu. Ya., 355
 Mikhailov, B. M., 291
 Mikus, F. F., 280
 Milazzo, G., 355
 Miles, H. T., 461
 Mihalyi, E., 207
 Milkovitch, R., 117
 Millea, M. F., 93
 Millen, D. J., 264
 Miller, A. S., 418
 Miller, C. G., 10
 Miller, D. G., 251, 265,

- 282
 Miller, F. A., 358, 360
 Miller, G. H., 63
 Miller, J., 344
 Miller, J. G., 8, 9
 Miller, N., 292
 Miller, R. C., 221, 236, 238, 463
 Miller, R. P., 127
 Miller, R. R., 10
 Milligan, D. E., 152, 153, 394, 403, 404
 Milliken, R. C., 14
 Mills, G. A., 84
 Mills, G. J., 223
 Mills, I. M., 344, 399
 Mills, J. E., 156
 Mills, R., 265
 Milne, T. A., 221, 236, 238, 463, 465
 Milner, D. C., 307, 308, 310
 Mims, S. S., 364
 Minder, W., 321, 322
 Mindler, A. B., 136
 Minkoff, G. J., 145, 150, 151, 154, 158
 Minn, S., 93
 Mino, G., 109
 Minoura, Y., 105
 Mishchenko, K. P., 8, 259
 Mislow, K., 175
 Misra, H., 446
 Misselwitz, W., 94
 Mitchell, A. D., 31
 Mitchell, J. C., 197
 Mitchell, J. W., 415
 Mitsev, M. A., 89
 Mitz, M. A., 361
 Miva, K., 9
 Miyake, A., 90
 Miyama, H., 5, 15, 18
 Miyagawa, I., 39
 Miyazawa, T., 12, 37
 Mizuno, G. R., 303
 Mizuno, Y., 349, 352
 Mizushima, S., 36, 37
 Mochizuki, T., 458
 Model, I. Sh., 459
 Modena, G., 355
 Moeckel, W. E., 469
 Moessen, G. W., 38, 39
 Moesta, H., 87, 89
 Moffitt, W., 197, 344, 349, 350, 352, 356, 362, 364, 368, 369
 Mohler, H., 289, 305
 Mohrhauer, H., 302
 Moir, R. Y., 170, 447
 Molisev, I. I., 177
 Mok, S. F., 172, 178
 Molinari, E., 86
 Möller, U., 247
 Molyneux, P., 113, 115
 Monk, C. B., 256, 258, 263
 Monnier, D., 253
 Monroe, A. M., 358
 Montroll, E. W., 146, 193, 274, 276, 396, 459
 Moody, G. J., 297
 Mooi, J., 81
 Moore, A., 226, 467
 Moore, H. R., 449
 Moore, R. E., 234
 Moore, R. T., 14
 Moore, S., 138, 192
 Moore, W. J., 409-34; 419, 428
 Morales, M. F., 5, 6
 Moran, T. I., 283
 Morawetz, H., 183
 Moreau, J., 89
 Morey, G. W., 468
 Morgan, E. J. H., 439
 Morgan, H. W., 404
 Morgans, D. B., 256
 Morgulis, N. D., 88
 Morgunova, N. N., 458
 Mori, Y., 105
 Moriconi, E. J., 357, 363
 Morigaki, K., 362, 443
 Mörikofer, A., 18
 Morino, Y., 36, 37, 39, 400
 Morita, K., 361
 Morita, T., 353, 362
 Moritz, A. G., 363
 Morotomi, Y., 357
 Morozov, V. P., 9, 469
 Morris, D. F. C., 10
 Morris, G. C., 367
 Morris, J. P., 222
 Morris, W. C., 12
 Morrison, J., 429
 Morrison, J. A., 9, 11, 418
 Morrison, J. D., 9, 362, 392
 Morrison, J. L., 81
 Mortimer, C. J., 13, 17
 Mortimer, C. T., 5, 6, 9, 12, 13, 14, 16
 Mortlock, A. J., 458
 Moscowitz, A. J., 349, 350, 362
 Moseley, F., 57
 Moser, H., 458
 Motchane, J. L., 90, 450
 Mott, N. F., 411, 423
 Motz, H., 458
 Moss, T. S., 414
 Moule, D., 266
 Movsesyan, M. E., 11
 Mowry, D. T., 111
 Moyer, H. C., 308
 Mrowec, S., 464
 Mrowka, B., 332
 Muan, A., 230, 231
 Muckerfuss, C., 283
 Muel, B., 366
 Mueller, W. A., 354, 363
 Mukherji, A., 445
 Muldrow, C. N., Jr., 9, 10
 Mulford, R. N. R., 232
 Mullen, J. D., 70
 Müller, H., 248
 Müller, H. R., 278
 Muller, J. H., 448
 Müller, K. A., 444
 Muller, N., 353
 Müller, W., 86
 Müller, W. D., 253
 Muller, W. H., 361
 Mulliken, R. S., 40, 343, 351, 353, 355, 367, 368
 Munch, A. U., 364
 Münster, A., 276, 277, 410, 464
 Munthe-Kaas, T., 33, 34
 Murakami, H., 362
 Murphy, C. J., Jr., 16
 Murphy, F., 81
 Murphy, W. K., 9, 220, 277, 470
 Murray, A. J. R., 116
 Murray, F. E., 276
 Murray, G. R., Jr., 448
 Murray, P., 468
 Murray-Rust, D. M., 263
 Murrell, J. N., 354, 358, 362, 368
 Murthy, T. K. S., 137
 Musha, S., 365
 Musher, J., 170, 357, 447
 Musrobian, R. B., 107, 108
 Mustajoki, A., 11
 Mustakas, G. C., 138
 Muthana, M. S., 118
 Muttk, G. G., 81
 Myasnikov, I. A., 86, 89
 Myazkol, O. N., 129
 Myers, C. E., 228, 237, 238
 Myers, G. E., 126
 Myers, L. S., 298, 299
 Myers, O. E., 447
 Myers, R. J., 34
 Myerson, A. L., 55
 Myhre, D. V., 138
 Myhre, P. C., 177

N

- Naar-Colin, C., 447
 Nachod, F. C., 358
 Nachtrieb, N. H., 9
 Nagakura, S., 363, 369
 Nagata, C., 356
 Nagel, H.-D., 14
 Nagle, R. A., 137
 Nagura, T., 462
 Nagy, F., 78
 Nair, P. M., 170
 Nair, V. S. K., 8, 253, 254, 256
 Naismith, W. E. F., 11
 Nakai, Y., 90, 91
 Nakajima, T., 357, 358, 361

- Nakamura, H., 260
 Nakayama, T., 355
 Nämisch, W., 8, 9
 Nancollas, G. H., 8, 253, 254, 255, 256
 Narasimhan, P. T., 447
 Näänen, R., 12
 Nash, G. R., 258, 263
 Nathans, M. W., 94
 Natta, G., 103
 Naumann, G., 123
 Naumann, R. V., 364
 Naumov, V. A., 43, 44, 467
 Naumova, S. F., 355
 Nauta, W. T., 359, 363
 Nazarova, R. I., 424
 Neale, E., 6
 Nebbia, G., 253
 Necsoiu, I., 180
 Nederbragt, G. W., 282
 Neff, H. F., 312
 Neill, W. J., 63
 Nelson, B., 460
 Nelson, F., 130
 Nelson, G., 4, 5
 Nenitzescu, C. D., 179, 180
 Nenkom, H., 138
 Neshpor, V. S., 228
 Nesmeyanov, A. N., 9, 222, 236, 237
 Nettleton, D. E., Jr., 4, 13, 16, 18
 Neugebauer, C. A., 14
 Neumann, K., 469
 Neurath, H., 206
 Neumar, E. W., 135
 Neveu, M. C., 182, 183
 Newell, G. F., 193, 335
 Newey, C. W. A., 415
 Newhouse, V. L., 94
 Newing, R. A., 448
 Newitt, E. J., 70
 Newkirk, H. W., Jr., 459
 Newkirk, T. F., 230, 233
 Newman, A. C. D., 136
 Newman, E. S., 11
 Newman, L., 256
 Newman, R. B., 8, 280
 Newton, A. S., 302, 303
 Newton, R. F., 220, 222, 238, 277
 Neyman, L. A., 171
 Nichol, J. C., 264
 Nichol, R. J., 5
 Nicholls, R., 460
 Nichols, G. E., 9
 Nicholson, A. J. C., 465
 Nickell, E. C., 303
 Nickson, G. M., 4
 Nicolaus, R., 18
 Nielsen, A. T., 355
 Nielsen, H. H., 404
 Nielsen, H. M., 136
 Nielsen, J. W., 232
 Nielsen, S., 357
 Nielson, S. O., 201, 202, 203
 Niemann, C., 171
 Niemann, H., 281
 Nietzel, O. A., 137
 Nifontoff, N., 93
 Niimi, A., 282
 Nikitina, T. S., 312
 Nikitine, S., 89
 Nikolsky, B. P., 131
 Nikonov, F. G., 458
 Nilsson, G., 8, 9
 Nilsson, R. O., 256
 Nilsson, W. A., 447
 Nishikawa, T., 38, 39
 Nishimoto, K., 358
 Nishioka, A., 313
 Nitta, I., 447
 Niwa, K., 238, 464
 Nixon, A. C., 301
 Noble, P., 127
 Noel, M., 3, 7
 Noggle, T. S., 425
 Noland, W. E., 357
 Nolin, B., 304, 442
 Noll, W., 79
 Nolle, A. W., 13, 448
 Noller, H., 139
 Nonogaki, S., 127
 Nord, F. F., 210, 360
 Norman, A., 304
 Norman, I., 161
 Norris, W. G., 466
 Norrish, R. G. W., 54, 55, 61, 106, 107, 154, 393
 Nortia, T., 369
 Norton, J. T., 228, 464
 Notley, N., 207
 Novick, R., 447
 Novinsky, J. A., 135, 136
 Novoselova, A. V., 8
 Nowick, A. S., 277
 Nowotny, H., 227, 228
 Noyce, D. S., 177
 Noyce, W. K., 229
 Noyes, W. A., Jr., 65
 Null, M. R., 459
 Nygaard, L. H., see Hansen-Nygaard, L.
 Nyholm, R. S., 361
 Nyquist, I. M., 399
 Nyren, V., 11, 13, 15, 16
 Nys, J., 360
 Nývlt, J., 265
- O
- Oae, S., 13
 Oberthrin, H., 138
 Oblad, A. G., 84
 O'Brian, C. D., 428
 O'Connor, W. F., 357, 363
 O'Day, M., 460
 Odian, G., 171
 Odiet, S., 350
 Oel, H. J., 9, 134
 Oetting, F., 4
 Ofele, K., 369
 Ogawa, M., 355
 Ogg, R. A., Jr., 393, 448, 449
 Oglesby, A. C., 111
 Oharenko, L., 298
 Ohno, K., 334
 Öhrn, O., 5
 Ohta, M., 358
 Ohtsuka, M., 443
 Oishi, J., 458
 Oiwa, I. T., 258
 Ojima, H., 365
 Oka, T., 36
 Okabe, H., 65
 Okamoto, H., 78, 84
 Okaya, Y., 9, 10
 Oksengorn, B., 396
 Oksman, I. A., 94
 Oldenberg, O., 158
 Olson, G. C., 5
 Omel'chenko, S. I., 357
 Ōno, K., 443
 Onsager, L., 261, 263
 Onyon, P., 103
 Onyszchuk, M., 61
 Ooshika, Y., 359, 361
 Oosterhoff, L. J., 364, 369
 Opika, U., 436
 O'Reilly, D. E., 445, 448
 Orehov, V. S., 294
 Oreshkin, P. T., 458
 Oreskes, I., 183
 Orestova, V. A., 129
 Orgel, L. E., 336, 350, 352, 365, 367, 369, 448
 Oriani, R. A., 9, 219, 220, 227, 470
 Ormand, F. T., 344
 Ormont, B. F., 10
 Orr, J. E., 228
 Orr, R. J., 9, 113
 Orr, R. L., 9, 223, 277, 470
 Orville-Thomas, W. J., 350
 Osada, K., 365
 Osberg, W. E., 402, 403
 Osborn, C. L., 357
 Osborn, E. F., 231
 Osher, J., 461
 Oshida, I., 361
 Osipov, O. A., 179, 252
 Ossorio, R. P., see Perez-Ossorio, R.
 Oster, G., 109, 360, 366
 Ostertag, H., 10
 O'Sullivan, W. J., Jr., 459
 Oth, J. F. M., 194, 198, 199
 Othmer, D. F., 139
 Otsuka, M., 462
 Otter, R. J., 256
 Ottewill, R. H., 206
 Otting, W., 357

Otto, J., 458
 Otvos, J. W., 290
 Oubridge, J. V., 260
 Ovenall, D. W., 161, 313,
 392, 442, 443, 446
 Overend, W. G., 299
 Overhauser, A. W., 449
 Owaki, M., 313
 Owen, G. E., 233
 Owen, J., 444
 Owens, B., 467
 Owens, F. H., 359
 Ozawa, T., 468

P

Pace, E. L., 77, 80
 Packham, D. L., 5, 358
 Paddock, N. L., 353
 Page, F. M., 369, 467
 Paidassi, J., 464
 Paillous, J. K., see
 Kahane-Paillous, J.
 Pake, G. E., 338
 Pakhomova, O. S., 356
 Palko, A. A., 10, 238
 Palm, A., 393
 Palmer, E. D., 10
 Palmer, H. B., 461
 Palmer, R. C., 290
 Palmer, W., 425
 Palmork, K. H., 45, 46
 Pan, H.-P., 303
 Panasuk, G. P., 94
 Panayides, S. G., 180
 Panchenkov, G. M., 129
 Panckhurst, M. H., 255
 Panish, M. B., 220, 277
 Pankey, J. W., 470
 Pannetier, G., 156
 Panthaleon van Eck, C. L.
 van, 251
 Papalhau, J., 465
 Paparoditis, C., 93
 Papazian, H., 157, 161
 Papee, D., 84
 Papee, H. M., 5, 11, 12,
 14, 15, 17, 80, 259
 Pappalardo, G., 355, 357,
 358
 Pappis, J., 419
 Parish, D. J., 302
 Park, J. D., 4, 5, 66
 Park, J. G., 445
 Parker, C. A., 159, 161
 Parker, E. R., 415, 470
 Parkinson, W., 460
 Parks, J. M., 352
 Parr, R. G., 334, 343, 352,
 354
 Parravano, G., 86
 Parrish, R. G., 48
 Parry, F., 359
 Parry, R. W., 15
 Parsons, J. S., 135
 Parsons, M. A., 305
 Parthasarathy, N. V., 363
 Parthé, E., 228
 Parton, H. N., 258
 Partridge, S. M., 135
 Pashinkin, A. S., 8
 Pask, J. A., 415, 470
 Passerini, R., 357
 Patal, S., 172, 178, 179
 Patel, J. R., 416
 Patels, C. C., 9
 Paterson, W. G., 262
 Patterson, D., 12, 14, 15,
 18
 Patterson, J. R., 459
 Patterson, W. L., 60, 467
 Pattin, H. S., 458
 Pauer, A. de, 115
 Paul, A. D., 256
 Paul, R. E., 338
 Paul, W., 414
 Pauling, L., 36, 170, 191,
 334, 352, 404
 Paulson, J. F., 302
 Paxton, H. W., 222, 237,
 470
 Payne, D. S., 9
 Payne, R. M., 461
 Peacocke, A. R., 299
 Peaker, F. W., 111, 119
 Pearce, J. H., 230
 Pearce, M. L., 264
 Pearson, A. D., 232
 Pearson, D. L., 369
 Pearson, F. J., 275
 Pearson, G. J., 9
 Pearson, G. L., 415
 Pearson, R. W., 310, 311
 Pearson, T. G., 158
 Pearson, W. B., 226
 Pease, R. S., 461
 Pebay, J. C., 446
 Pedersen, K. J., 11
 Pedley, J. B., 4, 6
 Peerbooms, R., 92
 Peers, A. M., 135
 Pegues, E. E., 172, 178
 Peiser, H. S., 146, 157
 Pell, E. M., 228
 Pellán, J. R., 150, 154
 Pelle, J., 282
 Peller, L., 193
 Pendle, T. D., 108, 318
 Penkin, N. P., 465
 Pennington, R. E., 12, 16
 Penzkofer, J., 86
 Pepe, F. A., 207
 Peperle, W., 18
 Pepinsky, R., 9, 10
 Perelman, M., 4, 13, 16,
 18
 Peretti, E. A., 229, 232
 Perex-Ossorio, R., 11, 12,
 14, 15, 17
 Pergiel, F. Y., 4, 10
 Perkampus, H. H., 357,
 358
 Perkins, P. G., 6
 Perny, G., 89
 Perrin, D. D., 256
 Person, W. B., 368, 399,
 400
 Perutz, M. F., 48, 200
 Pestmalls, H., 232
 Peter, O., 91
 Peter, W., 360
 Peters, D., 353
 Peters, H. E., 447
 Peters, K., 81
 Petersen, D. E., 12, 17
 Peterson, G. H., 78
 Peterson, M. D., 290
 Peterson, S. W., 363
 Peticolas, W. L., 205
 Petit, G., 10, 11
 Petritz, R. L., 93
 Petrucci, S., 264
 Pettit, R., 357, 358
 Peyron, M., 150, 151, 152,
 153, 155, 161
 Pfeleger, H., 79
 Pfeleger, R., 131
 Pfommer, J. F., 353
 Phelps, R. A., 206
 Phelps, W. C., Jr., 231
 Phillips, B., 231
 Phillips, D. C., 48
 Phillips, G. O., 297
 Phillips, J. A., 461
 Phillips, N. E., 9
 Phillips, W. D., 90
 Phillipson, P. E., 343
 Phung, P. V., 293
 Piche, L., 12, 14, 15, 18
 Pickett, L. W., 355
 Pierce, C., 81
 Pierce, L., 37, 404
 Pieroni, J. J., 3
 Pierpaoli, V., 358
 Pierson, R. M., 357
 Piesbergen, U., 10
 Piette, L. H., 393, 447,
 448, 449
 Pijanowski, S., 470
 Pikaeva, V. L., 301
 Pike, M., 116
 Pilar, F. L., 353
 Pillai, C. N., 358
 Pillon, D., 359
 Pimentel, G. C., 65, 152,
 153, 157, 393, 394, 423
 Pinch, H. L., 235
 Pines, D., 409
 Pines, H., 180
 Pinner, S. H., 311, 316,
 317
 Pinsker, Z. G., 42, 43
 Piper, T. S., 47
 Pipkin, F. M., 447, 449
 Pirkmajer, E., 359
 Pisecky, J., 8, 253
 Pitt, D. A., 282
 Pitts, J. N., 62, 63, 65
 Pitzer, K. S., 1, 12, 14,
 16, 17, 38, 39, 251, 254,
 280

AUTHOR INDEX

509

- Plachenov, B. T., 418
 Plapp, F. W., 138
 Plateeuw, J. C., 277, 278
 Platt, J. R., 349-88; 350,
 352, 354, 360, 361, 362,
 367, 368
 Platzer, R., 133
 Plesch, P. H., 110
 Plessset, M. S., 132, 133
 Pliskin, W. A., 91
 Pliva, J., 354
 Plooster, M. N., 461
 Plyler, E. K., 32, 44, 353
 Pocker, Y., 18, 172, 173,
 177, 178, 179, 261
 Podall, H., 5
 Podolsky, R. J., 5, 6, 261
 Poirier, J. C., 247-72;
 248
 Poirier, R. H., 136
 Polak, L. S., 301, 304
 Polansky, O. E., 356
 Polanyi, J. C., 55, 65,
 392
 Pollak, M., 449
 Pollock, B. D., 238
 Pollock, J. M., 252, 282
 Polo, S. R., 400
 Poltorak, O. M., 94
 Polyvannyi, I. R., 464
 Pomerantsev, I. N., 464
 Ponomarev, V. D., 464
 Poole, D. M., 230
 Poole, H. G., 146
 Popiel, W. J., 132
 Pople, J. A., 331-48; 283,
 334, 335, 336, 337, 342,
 349, 350, 354, 357, 359,
 363, 447, 448, 449
 Popov, A. N., 128
 Popov, M. M., 9, 10
 Popova, T. N., 459
 Poppe, G., 280
 Porter, B., 470
 Porter, G., 161, 362, 365,
 458
 Porter, G. B., 260, 261
 Porter, R. F., 219-46; 9,
 10, 11, 221, 236, 238,
 457, 463, 465, 466
 Poshkus, D. P., 80, 81
 Poskočil, J., 358
 Post, R. F., 460
 Pound, G. M., 462, 463
 Pranas, A. L., 420
 Prat, H., 3, 7
 Pratt, M. W. T., 16
 Pratt, P. L., 415
 Predel, B., 223
 Prelog, V., 175
 Prescher, K. E., 462
 Preston, B. N., 299
 Preuss, L. E., 463
 Prevalova, N. M., 12, 15,
 16, 17
 Pribytkova, N. A., 79
 Price, A. H., 8
 Price, C. C., 14
 Price, C. F., 464
 Price, P. B., 422
 Price, S. J. W., 57
 Price, W. C., 91
 Pridantsev, M. V., 458
 Prigogine, I., 273, 275,
 280
 Prilezhaeva, N. A., 459
 Primas, H., 447, 449
 Priselkov, Yu. A., 8
 Pritchard, D. E., 353
 Pritchard, G. O., 63
 Pritchard, H. O., 4, 5, 56,
 441
 Pritchard, J., 88
 Pritchard, J. G., 173
 Privett, O. S., 303
 Proctor, B. E., 303, 321
 Proctor, W. G., 449
 Pröger, H., 361
 Prokhvatilov, V. G., 467
 Proksch, E., 81
 Prosen, E. J., 4, 10, 84,
 464
 Proskina, V., 10
 Proskurnin, M. A., 302,
 303
 Provan, A. G., 467
 Prue, J. E., 249, 256
 Pruss, W., 79
 Pryanishnikova, M. A., 356
 Pryce, M. H. L., 436
 Przheval'skii, Ye. S., 369
 Przibram, K., 89
 Pshemenskii, A. A., 468
 Pucheault, J., 292
 Pugh, A. C. P., 10, 11,
 236, 238, 463
 Pujo, A. M. K., see
 Koukès-Pujo, A. M.
 Pullin, A. D. E., 252, 282
 Pullman, A., 169, 350, 357,
 361
 Pullman, B., 169, 350, 353,
 358, 359, 361
 Pultz, W. W., 78
 Purcell, E. M., 340
 Purdy, M. B., 138
 Puri, B. R., 81
 Purnell, J. H., 61
 Pushkareva, Z. V., 357
 Puzdrenkova, I. V., 369
- Q
- Quagliano, J. V., 158
 Queisser, H. J., 94
 Quincey, P. G., 12, 13, 16
 Quinkert, G., 185
 Quinn, F. A., Jr., 16
 Quinn, H. W., 78
 Quinn, R. S., 403
- R
- Raen, V. F., 170, 176, 181
 Rabinovitch, B. S., 56
 Rabinovitch, D. S., 461
 Rabinowicz, J., 458
 Rabinowitch, E., 361
 Rachinsky, M. R., 206
 Rachinsky, V. V., 135
 Rackow, B., 361
 Radavich, J. F., 464
 Radford, H. E., 147, 155
 Raether, M. C., 138
 Raffel, H., 284
 Raizer, Y. P., 459
 Rajewsky, B., 298
 Rail, W., 276
 Ralph, A. S., 356
 Ramachandra Rao, C. N.,
 34, 44, 356, 358
 Ramachandru, J., 358
 Ramakrishnan, V., 355
 Raman, C. V., 351
 Ramanathan, K. G., 9
 Rambidi, N. G., 43, 44,
 236, 467
 Rambosson, M., 446
 Ramirez, E. R., 264
 Ramsay, D. A., 155, 391,
 392, 465
 Ramsden, S. A., 461
 Ramsey, J. B., 94, 249,
 255
 Ramsey, N. F., 334, 335,
 459
 Ramsey, W. J., 225
 Ramthun, H., 462
 Randall, S. P., 466, 468
 Rands, D. G., 206, 211
 Rangarajan, V., 367
 Ransil, B. J., 147
 Rao, C. N. R., see
 Ramachandra Rao, C. N.
 Rao, I. A., 366
 Rao, V. R., 366
 Rappeneau, T., 93
 Rasburn, J. W., 170
 Rastogi, R. P., 278
 Rastrup-Andersen, J., 33,
 34, 35, 358
 Rathbone, P., 9
 Ravich, M. I., 468
 Raw, C. J. G., 470
 Rawson, E. B., 155
 Ray, B. R., 257, 443
 Ray, J. D., 393, 447, 449
 Ray, P., 369
 Ray, W. A., 262
 Rayne, J. A., 9, 10
 Raynor, G. V., 226, 229
 Rayson, H. W., 223
 Re, G. D., see Del Re, G.
 Read, J. E., 461
 Reay, J. S. S., 78
 Rebbert, R., 150
 Reddi, K. K., 361
 Redding, G. B., 416
 Reddock, A. H., 10
 Reddy, M. P., 300, 301
 Redfield, R. F., 192

- Redlich, O., 259
 Redman, M. J., 124
 Reed, J. F., 461
 Reed, R. I., 11
 Reed, R. R., 9
 Reed, W. L., 177
 Reese, R. M., 8, 153
 Reese, W. T., 159, 161
 Reeves, C. G., 12, 13, 15, 78
 Reeves, C. M., 345
 Reeves, L. W., 11, 176, 281, 447, 448
 Reeves, R. A., 357
 Reeves, R. R., 55, 149
 Regnier, J., 355
 Reichardt, H., 155, 158
 Reichen, L. E., 136
 Reichmann, M. E., 206
 Reid, C., 40, 289, 350, 365, 391
 Reid, D. H., 357
 Reid, T. F., 467
 Reidman, P. S., 227
 Reigert, A. L., 321
 Reijen, L. L. van, 85
 Reilly, C. A., 16, 447
 Reimer, L., 93
 Reinitzer, P., 469
 Reiser, A., 363
 Reisman, A., 231
 Reitzer, C., 89
 Rekker, R. F., 359, 363
 Rembaum, A., 117
 Remington, T. A., 12, 13, 15
 Rempel, R. C., 444
 Rengemo, T., 8, 9
 Renner, H., 357
 Restiano, A. J., 108
 Rettmer, R. S., see Schulze-Rettmer, R.
 Reyerson, L. H., 78
 Reynolds, R. E., 281, 365
 Reynolds, W. L., 252
 Rezneczkii, L. A., 11
 Reznikova, I. I., 365
 Rezuikhina, T. N., 10
 Rhines, F. N., 226
 Rhodes, M. B., 138
 Riccardi, R., 18, 254
 Rice, F. O., 62, 145, 156, 157, 161, 162, 467
 Rice, O. K., 276, 410
 Rice, S. A., 6, 7, 13, 193, 236, 280, 466, 469
 Rice, W. E., 283
 Richard, N. A., 467
 Richards, N. E., 9, 11, 238
 Richards, R. E., 170, 357, 447, 448
 Richardson, A. C. B., 15
 Richardson, F. D., 8, 225
 Richmond, J. C., 459
 Richter, G., 127
 Ridd, J. H., 173, 177, 180
 Rieche, A., 169
 Riegelman, S., 363
 Rienäcker, G., 85
 Rieser, L. M., Jr., 94
 Riesz, P., 290
 Rigole, W., 266
 Riley, M. W., 464
 Rimington, C., 361
 Rinehart, K. L., Jr., 447
 Rink, J. P., 9
 Ritchie, M., 83
 Rivsky, W. A., 224
 Ro, R. S., 170
 Roach, A. G., 359, 360
 Robb, J. C., 57, 70
 Robbins, E. A., 11
 Robert, R. W., 461
 Roberts, D. E., 194
 Roberts, G. L., 211
 Roberts, J. D., 169, 170, 447
 Roberts, J. E., 260
 Roberts, J. T., 135, 136
 Roberts, M. W., 83
 Roberts, R. M., 180, 355
 Robertson, A. J. B., 158
 Robertson, E. C., 460
 Robertson, R. E., 173, 435, 436, 438
 Robertson, W. G. P., 107
 Robertson, W. W., 281, 356, 363, 365
 Robin, S., 396
 Robins, J., 356
 Robinson, B. D., 127
 Robinson, D. N., 357
 Robinson, E. A., 16
 Robinson, G. B., 449
 Robinson, G. W., 156, 158, 161, 359, 362
 Robinson, J. M., 356, 363
 Robinson, P. D., 342
 Robinson, P. H., 88
 Robinson, P. L., 70
 Robinson, R. A., 251, 257
 Robson, H. E., 238
 Rocard, J. M., 447, 450
 Rocks, L., 44
 Rodebush, W. H., 158
 Roderick, G. W., 252
 Roe, E. M. F., 363
 Roebber, J. L., 65
 Rogers, B. A., 230
 Rogers, D. A., 366
 Rogers, M. T., 170, 447
 Rogers, O. C., 130
 Roginski, S. Z., 85, 86
 Rohmer, R., 86
 Rol, P. K., 428
 Rolfe, J., 413
 Roll, A., 458
 Rollefson, G. K., 65
 Romain, P., 253
 Romankevich, M. Ya., 134
 Romanov, A. M., 89
 Romanov, M. N., 128
 Romeo, G., 86
 Romeyn, H., 2, 3, 4
 Romming, C., 40, 41
 Roof, J. G., 280
 Roothaan, C. C. J., 344
 Rose, R., 170
 Rosen, I., 302
 Rosenbaum, H., 421
 Rosenberg, A. J., 81, 87, 88, 94
 Rosenberg, B., 367
 Rosenblum, M., 170
 Rosenhead, L., 284
 Rosenstein, R., 47
 Rosenthal, F. D., 223
 Rösinger, S., 295
 Ross, D. A., 292, 293
 Ross, I. G., 350, 365
 Ross, J., 461, 469
 Ross, S., 78
 Rösset, T., 358
 Rosser, W. A., 461
 Rossi, A., 265
 Rossi, C., 265
 Rossini, F. D., 1
 Rossler, F., 458
 Rostoker, W., 226, 228
 Rotblat, J., 292, 322
 Rothberg, G. M., 221, 236, 238
 Rothery, W. H., see Hume-Rothery, W.
 Rothery, W.
 Rothschild, M.-L., 298, 299
 Rothschild, S., 232
 Rothschild, W. G., 293, 294, 321
 Rough, F. A., 229
 Rout, M. K., 447
 Roux, D., 447, 450
 Rowden, R. W., 276
 Rowe, A. H., 418
 Rowland, T. J., 448, 449
 Rowlinson, J. S., 274, 279, 280
 Roy, A. E., 227
 Roy, D. M., 233, 235
 Rubin, E. L., 273
 Rubin, R. J., 396, 459
 Rubinshtein, A. M., 78, 79
 Rubinstein, H., 358
 Ruch, E., 368
 Rudham, R., 83, 418
 Rudnitskii, A. A., 458
 Ruedenberg, K., 352
 Ruehrwein, R. A., 154, 155
 Ruhoff, J. R., 2, 3, 4
 Rüländ, H., 11, 12, 13, 14, 15, 17, 18
 Runciman, W. A., 350
 Rundle, R. E., 42, 45, 422
 Rush, P. E., 421
 Rushbrooke, G. S., 273-88; 274, 275
 Rushworth, F. A., 355, 448
 Russell, A. M., 463
 Russell, W. W., 85

- Rust, D. M. M., see
 Murray-Rust, D. M.
 Rutgers, A. J., 266
 Rutledge, R. L., 176, 178, 363,
 440, 443
 Rutner, E., 469
 Ruyter van Steveninck, A.
 W. de, 177
 Rydberg, J., 290
 Rylander, P. N., 362
 Ryle, A. P., 192, 199, 211
 Ryon, A. D., 10, 238
 Rysina, T. N., 361
 Ryskiewicz, D. P., 13
- S
- Sacha, A., 356
 Sachtler, W. M. H., 88
 Sack, R. A., 436, 449
 Sackman, J. F., 18
 Sadek, H., 260
 Sadó, A., 358, 359
 Sadron, C., 191
 Safrata, R. S., 10
 Sage, B. H., 460
 Sagel, K., 276, 277, 410
 Sagenkahn, M. L., 38, 39
 Sahu, J., 366
 Saidel, L. J., 361
 Saika, A., 336
 St. Pierre, L. E., 307
 Saito, O., 309
 Saito, S., 18, 254
 Saito, Y., 449
 Sakamoto, M., 344
 Sakellaridis, P., 90, 253
 Salamon, M., 261
 Saldadze, K. M., 127, 128,
 130, 131
 Salkovits, E., 365
 Saller, H. A., 229
 Salmon, D. N., 225
 Salmon, J. E., 131
 Salmre, W., 361, 366
 Salnis, K. Yu., 8
 Salsburg, Z. W., 273, 280
 Samedy, S. R., 137
 Samofalova, G. S., 179
 Samolov, O. Ya., 250, 251
 Samolov, S. M., 78
 Samolov, V. P., 369
 Samorukov, O. P., 9, 10,
 12
 Samson, E. W., 149, 152
 Samson, Yu. U., 8, 12
 Samsonov, G. V., 129, 130,
 228
 Samuel, I., 352
 Samuelson, O., 129, 132
 Sanborn, R. H., 17
 Sanders, T. M., 159, 466
 Sandler, Y. L., 81, 87
 Sandomirskii, V. B., 82
 Sandorfy, C., 363
 Sandros, K., 365, 366
 Sands, R., 447
- Sands, R. H., 439
 Sanford, B. P., 94
 Sanger, F., 192, 199, 211
 Sano, H., 137
 Saraeva, V. V., 301
 Sarjant, R. J., 470
 Sarkanen, K., 366
 Sárkány, B., 366
 Sarles, L. R., 449
 Sarnowski, M., 250
 Saroff, H. A., 205, 206
 Sartori, G., 260
 Sasaki, N., 464
 Sasaki, T., 93
 Sass, R. L., 46
 Sastry, B. S. R., 231
 Satchell, D. P. N., 173,
 176, 179
 Sato, S., 68
 Sato, T., 358
 Sauer, J. A., 307, 311
 Sauer, J. C., 369
 Sauer, K., 69
 Saunders, M., 12, 448
 Saunders, W. H., Jr., 175
 Saurel, J., 8, 469
 Savage, W. R., 470
 Savornin, F., 93
 Sawicki, E., 357, 358
 Saxena, B. S., 362
 Saxena, S. C., 282
 Saylor, J. H., 36, 281
 Sayushkina, E. N., 138
 Sazonova, I. S., 86
 Scalfé, D. B., 8, 256, 257
 Scales, W. W., 10, 11
 Scanlan, J., 349
 Scarano, E., 361
 Scarborough, J. M., 319
 Scatchard, G., 205, 206,
 223
 Schaefer, T. P., 447
 Schaeffer, O. A., 290, 291
 Schaeffer, R., 45, 448
 Schäfer, H., 10, 12, 467
 Schäfer, K., 9, 276
 Schairer, J. F., 230
 Schamp, H. W., Jr., 15
 Schatz, P. N., 401
 Schauenstein, E., 212, 355
 Schay, G., 77, 78, 81
 Scheer, M. D., 10, 146,
 237, 423, 463
 Scheinberg, I. H., 206
 Scheller, K., 145, 469
 Schellman, J. A., 192, 193,
 194, 195, 197, 198, 212
 Schenck, G. O., 303
 Scheraga, H. A., 191-213:
 6, 191, 193, 196, 197, 198,
 199, 201, 203, 204, 205,
 206, 207, 208, 209, 210,
 211, 212, 361
 Scherber, F. I., 150, 151,
 154, 161
 Scherr, C. W., 352
 Schiebe, G., 359
- Schiefele, G., 358
 Schiessler, R. W., 18, 280,
 284
 Schiff, H. I., 146, 148, 149,
 154
 Schiller, H., 15
 Schiller, J. C., 368
 Schimann, H., 125
 Schindewolf, U., 137, 139
 Schindler, F. M., 273
 Schissel, P., 221, 237, 466
 Schissler, D. O., 290
 Schläfer, H. L., 368
 Schlag, E. W., 56
 Schlamp, G., 464
 Schleich, K., 8, 9
 Schlener, W., 118
 Schlessinger, B. S., 206
 Schlier, R. E., 84, 92
 Schlögl, R., 128, 133
 Schlueter, R. J., 361
 Schmall, E. A., 184
 Schmatz, W., 9
 Schmeising, H. N., 353
 Schmid, G., 134
 Schmid, H., 63
 Schmillen, A., 365
 Schmir, G. L., 183
 Schmitt, J. M., 127
 Schmitt, R. G., 358
 Schmolke, R., 463
 Schnabel, W., 108, 318
 Schneider, C., 315
 Schneider, E. E., 161, 445
 Schneider, G., 458
 Schneider, W. G., 11, 89,
 176, 337, 357, 366, 367,
 447, 448
 Schnepf, O., 356
 Schnek, G., 212
 Schniedermann, G., 9
 Schoen, A. H., 417
 Schoen, L. J., 146, 150
 Schoffa, G., 439
 Schofield, T. H., 470
 Scholten, J. J. F., 84
 Schomaker, V., 34, 44
 Schoolery, J. N., 146
 Schoonmaker, R. C., 9, 10,
 11, 221, 236, 238, 463,
 465
 Schott, G., 461
 Schott, G. L., 55, 60, 461
 Schottky, W. F., 9, 220
 Schottmiller, J. C., 226
 Schrader, R. J., 467
 Schrecker, A. W., 359
 Schreiner, S., 12
 Schreurs, J. W. H., 362
 Schrieffer, J. R., 409
 Schubert, J., 131, 137
 Schubert, W. M., 177, 356
 Schuetz, R. D., 357
 Schug, K., 10, 258
 Schuhmann, R., 224
 Schuit, G. C. A., 85
 Schuldiner, S., 278

- Schüler, H., 366
 Schuler, N. W., 109
 Schuler, R. H., 292, 300
 Schultze, D., 86
 Schultze, H., 176
 Schulz, W. W., 135
 Schulze, D., 79
 Schulze, J., 357, 358
 Schulze-Rettmer, R., 8
 Schumacher, E., 139
 Schumacher, H. J., 57
 Schumacher, K., 306, 307, 308, 309
 Schumann, S. C., 38, 39
 Schütza, H., 8, 9
 Schwab, C. M., 355
 Schwab, G. M., 79, 82, 85, 86
 Schwabe, K., 14, 15, 257
 Schwartz, C. M., 229, 467
 Schwartz, M. A., 467
 Schwartz, R. N., 54
 Schwarz, R., 253
 Schwarzenbach, G., 259
 Schweitzer, G. K., 293
 Schwenker, R. P., 446
 Schwert, G. W., 212, 361
 Scoins, H. I., 274
 Scott, A. B., 413
 Scott, D. W., 12, 14, 16
 Scott, E. J., 463
 Scott, G. D., 463
 Scott, G. G., 422
 Scott, G. S., 461
 Scott, J. F., 364
 Scott, M. D., 116, 117
 Scott, R. L., 273, 278, 279, 368
 Scott, T. W., 461
 Scott, V. D., 94
 Scrocco, M., 18, 355
 Scruby, R. E., 5
 Seales, R. A., 225
 Searcy, A. W., 228, 237, 238, 457
 Sears, G. W., 416, 463
 Sears, P. G., 263
 Seavey, M. H., 409
 Sebban-Danon, J., 108, 316, 318
 Secco, E. A., 158, 419
 Secoy, C. H., 257, 296
 Seeger, A., 411
 Seeger, A. K., 425
 Seeger, W., 170
 Seely, G. R., 361
 Segal, B., 435-56; 437, 441
 Segall, J., 459
 Seidel, B., 356
 Seifert, R. L., 466
 Seigle, L. L., 420
 Seitelberger, F., 360
 Seitz, F., 412, 425
 Sela, M., 192, 198, 211, 212
 Selby, R. N., 12, 13
 Selden, G. L., 361
 Selivanov, V. V., 469
 Sella, C., 307
 Selton, B., 128
 Seltveil, A., 235
 Selwood, P. W., 89, 146
 Semenko, K. N., 467
 Semenov, N. N., 53
 Semenow, D., 181
 Semiletov, S. A., 42
 Sender, M., 359
 Sen Gupta, A. K., 256
 Seno, S., 357
 Sense, K. A., 10, 11, 234, 237, 238, 463, 466
 Serlin, I., 305
 Serpukhova, L. N., 369
 Serré, J., 355, 360
 Seward, R. P., 263
 Shabilya, A. V., 358
 Shade, R. W., 16
 Shafrin, E. G., 94
 Shakespeare, N. E., 104
 Shalek, R. J., 321
 Shalitin, Y., 192
 Shaltiel, D., 444
 Shamma, M., 359
 Shanmuganathan, S., 14, 15, 16, 355, 357
 Shapiro, I., 448
 Shaposhnikova, Z. P., 134
 Sharma, L. R., 81
 Sharp, R. F., 9, 253
 Sharpatii, V. A., 294
 Sharpless, L. K., 58, 63
 Sharpless, R., 149
 Sharrah, P. C., 467
 Shashoua, V. E., 106, 114
 Shavitt, I., 345
 Shaw, A. W., 180
 Shaw, B. A., 467
 Shaw, D., 464
 Shaw, E. R., 468
 Sheard, D. R., 4, 5
 Shedlovskaja, Yu. S., 9, 11
 Shedlovskil, A. A., 9, 11
 Shedlovsky, T., 255, 262, 263
 Sheehan, W. F., 34
 Sheinker, Yu. N., 356
 Sheldon, J. C., 355
 Shelomov, I. K., 252
 Shemyakin, F. M., 138
 Shemyakin, M. M., 171
 Shen, A. L., 205, 206
 Shenker, L. H., 464
 Shepard, R. L., 458
 Shepp, A., 366
 Sheppard, N., 91, 447
 Sheridan, J., 34
 Sherman, W. F., 91
 Sherwood, A. G., 262
 Shevts, N. I. S., see Svede-Shevts, N. I.
 Shibata, K., 361
 Shibata, O., 109
 Shida, S., 64, 302, 334, 367
 Shields, H., 161, 304, 443
 Shih, C.-H., 181
 Shikauchi, T., 467
 Shilov, E., 173
 Shimada, J., 443
 Shimanouchi, T., 37, 400
 Shimazaki, E., 9, 238
 Shimizu, M., 91
 Shimozaawa, T., 39
 Shindo, K., 90, 91
 Shiner, V. J., 174
 Shinoda, K., 279
 Shinohara, K., 307, 308
 Shintani, R., 447
 Shiomi, R., 137
 Shiraiishi, Y., 464
 Shirn, G. A., 277
 Shits, L. A., 127, 137
 Shlyapintokh, I. Y., 469
 Shoemaker, D. P., 226
 Shooley, J. N., 34, 45, 170, 447, 448
 Shoosmith, J., 465
 Shore, W. S., 206
 Shorygin, P. P., 356, 363
 Shropshire, J. A., 257, 265
 Shrum, G. M., 145, 149, 152
 Shtekher, S. M., 12, 13, 15, 16, 17, 18
 Shtrikman, R. A., 470
 Shugar, D., 209, 211
 Shukla, S. K., 137
 Shuler, K. E., 396, 459, 465
 Shulgin, A. T., 363
 Shull, C. G., 467
 Shull, H., 343, 356
 Shulman, R. G., 34, 448, 449
 Shultz, A. R., 320
 Shustorovich, Ye. M., 353
 Shvartsman, L. A., 467
 Siddhanta, S. K., 256
 Sidman, J. W., 349, 350, 354, 358, 359, 365, 366
 Sidorov, T. A., 466
 Siebert, A. R., 80
 Sieglaff, C. L., 232
 Sieskind, O., 126
 Silcocks, C. G., 67
 Silcox, J., 416
 Sillén, L. G., 8, 9
 Sisbee, R. H., 426, 428
 Silverman, G. B., 356
 Silverman, N., 447
 Silvidi, A. A., 448
 Simanov, Y. P., 467
 Simha, R., 310
 Simkin, D. J., 8
 Simmons, R. O., 425
 Simnad, M. T., 462, 464
 Simon, A., 428, 460
 Simon, H., 174
 Simon, W., 18
 Simonetta, M., 355, 358

- Simonoff, G., 296
 Simpson, J. H., 449
 Simpson, W. T., 352, 360, 364
 Sims, C. T., 458, 464
 Sinclair, W. K., 321
 Sing, K. S. W., 79
 Singer, S. J., 206, 207
 Singh, B. K., 355, 362
 Singh, D. D., 81
 Singh, L., 334, 354
 Singleton, J. H., 277
 Sinke, G. C., 13, 14, 16, 17, 18, 239, 469
 Sinn, H., 352
 Sjöström, E., 123
 Skalinski, T., 446
 Skell, P. S., 169, 177, 350
 Skinner, H. A., 1, 4, 5, 6, 9
 Skinner, K. G., 465
 Skirrow, G., 70
 Sklyarenko, S. J., 8, 12
 Skoda, W., 358
 Skuratov, S. M., 12, 13, 15, 16, 17, 18
 Slabaugh, W. H., 126
 Slack, N., 84
 Slama, F. J., 366
 Slansky, C. M., 251
 Slater, N. B., 56
 Slauch, L. H., 173
 Slichter, C. P., 336
 Slichter, W. P., 307
 Slifkin, L., 419
 Slomp, G., 447
 Slonimskii, S. L., 116, 117
 Sluss, J. A., 419
 Slutskii, A. B., 460
 Slykhouse, T. E., 414
 Smagina, E. I., 10
 Smakhtion, L. A., 222
 Smaller, B., 148, 159, 160, 304, 413, 441, 442
 Smallman, R. E., 416, 426
 Smeltzer, W. W., 464
 Smets, G., 104, 110, 113
 Smidt, J., 443
 Smiltens, J., 9
 Smirenkina, I. P., 355
 Smirnof, M. V., 470
 Smirnova, O. V., 180
 Smit, J. van R., 125
 Smit, P. J., 362
 Smith, A. W., 82
 Smith, D. F., 8
 Smith, D. M., 360
 Smith, E. A., 2, 4, 5
 Smith, F., 138
 Smith, F. J., 9, 238
 Smith, F. T., 56
 Smith, G. P., 467
 Smith, G. W., 448
 Smith, H. A., 2, 3, 4
 Smith, H. G., 42, 422
 Smith, I. E., 461
 Smith, J. A. S., 448
 Smith, J. F., 10, 11, 227, 228
 Smith, J. H. C., 361
 Smith, J. M., 1
 Smith, L. F., 192, 199, 211
 Smith, L. L., 361
 Smith, M. B., 259
 Smith, M. L., 174
 Smith, N., 368
 Smith, N. B., 4, 5
 Smith, N. V., 281
 Smith, P., 9
 Smith, R. F., 71
 Smith, R. P., 170, 352
 Smith, S. D., 414
 Smith, T. L., 6
 Smith, W. V., 444
 Smithson, J. M., 254
 Smithson, J. R., 265
 Smothers, W. J., 465
 Smutz, M., 136
 Smyth, C. P., 282
 Smyth, D. G., 290
 Smyth, D. M., 9, 11, 17
 Snedden, W., 9
 Snow, A. I., 308
 Snow, C. M., 4, 5
 Snyder, L. C., 343
 Sobering, S. E., 61
 Sobolev, G. A., 43, 44, 467
 Sobolev, N. N., 458, 466
 Soboleva, L. N., 84, 91
 Socrava, J. V., 15, 16
 Soderberg, B. A., 79
 Sogo, P. B., 361, 367
 Sokol, L. S., 358
 Sollner, K., 134
 Solomon, I., 449
 Solomons, C., 260
 Solonitsyn, Yu. P., 83
 Solonskaya, N. Y., 358
 Solymosi, F., 86
 Somers, B. G., 15
 Sommer, R. C., 221, 222, 234, 466
 Sonesson, A., 256
 Sorm, F., 192
 Sorokin, P. P., 448
 Sorolla, A. G., see Giner-Sorolla, A.
 Soulen, J. R., 465, 466, 468
 Sowden, R. G., 162, 293
 Sowinski, R., 298
 Spackman, D. H., 138
 Spandau, H., 179, 260
 Sparatore, E., 353
 Sparrow, J. C., 162
 Spedding, F. H., 237, 458, 470
 Speiser, R., 118
 Spence, R. D., 448
 Spencer, T., 211
 Spencer, W. B., 78
 Spice, J. E., 158
 Spiegler, K. S., 134
 Spinar, L., 466
 Spinedi, P., 464
 Spinks, J. W. T., 296, 301, 321
 Spiridonov, V. P., 43, 44, 467
 Spitzer, L., Jr., 460
 Spomer, H., 364
 Springall, H. D., 12, 13, 16, 17
 Spurny, Z., 295, 298
 Spurr, O. K., 198, 199
 Spurr, O. K., Jr., 198, 199
 Spurr, R. A., 355
 Squire, C. F., 410, 448, 449
 Squire, W., 61, 461, 467
 Sreedbar, A. K., 8
 Srinivasan, R., 57
 Srinivasan, T. M., 9
 Srivastava, B. N., 283
 Srivastava, K. P., 283
 Staab, H. A., 357
 Stackelberg, M. von, 278
 Stallings, J. P., 302
 Stanier, R. Y., 361, 367
 Stankevich, I. V., 171, 353, 362
 Stanton, H. E., 9
 Starb, H. H., 449
 Starodubtsev, S. V., 89
 Stasova, M. M., 43
 Staude, H., 15, 18
 Stauff, D. W., 415
 Staveley, L. A. K., 6, 9, 10, 14
 Steacie, E. W. R., 62, 63, 65, 66, 145, 146, 153
 Stead, B. D., 112, 113
 Stebbins, J., 458
 Stecher, E. D., 12, 18
 Steck, E. A., 358
 Stedman, G., 181, 260
 Steel, B. J., 264
 Steele, R. H., 366
 Steele, W. H., 79
 Steger, E., 355
 Steigman, J., 134, 207
 Steijn, R. P., 227
 Stein, B., 133
 Stein, G., 295, 299
 Stein, W. H., 138, 192
 Steiner, K., 138
 Steiner, R. F., 7, 207
 Steinhart, J., 208
 Steinmetz, R., 303
 Steins, G., 161
 Stejskal, E. O., 449
 Stensholt, S., 149, 152
 Stephen, M. J., 282, 335, 447
 Stephens, D., 355
 Stephens, S. J., 84
 Stepko, I. I., 85
 Sterman, M. D., 206

- Stern, J. H., 462
 Stern, K. H., 220, 255
 Stern, M. D., 206
 Sterrett, K. F., 10
 Stettbacher, A., 460
 Steveninck, A. W. de R. van, see Ruyter van Steveninck, A. W. de
 Stevens, B., 349, 365
 Stevens, D. K., 426
 Stevens, K. W. H., 444
 Stevens, T. E., 356
 Stevenson, D. A., 227
 Stevenson, D. P., 43, 44, 290, 350, 356, 363, 448
 Stewart, D. C., 352
 Stewart, E. T., 357
 Stewart, F. B., 158
 Stewart, G. H., 170, 352
 Stewart, J. E., 459
 Stewart, J. W., 12, 14, 17, 18
 Sthapitanonda, P., 464
 Stimson, V. R., 58
 Stitch, M. L., 34, 466
 Stock, D. I., 262
 Stock, R., 78
 Stocker, D., 356
 Stockman, C. H., 312
 Stockmayer, W. H., 118
 Stolcheff, B. P., 33, 34, 36, 37, 43, 44, 353, 404, 405
 Stokes, C. S., 459
 Stokes, J. M., 262, 263
 Stokes, R. H., 251, 257, 262, 263, 264
 Stokes, S., 355
 Stone, F. S., 83, 85
 Stone, H. H., 296
 Stone, R. W., 10, 11, 234, 237, 238, 463, 466
 Stonehill, A. A., 322
 Stookey, S. D., 468
 Strachan, E., 362
 Stracher, A., 192
 Strait, L. A., 363
 Strandberg, M. W. P., 34, 332
 Stranks, D. R., 15
 Stranski, I. N., 462, 463
 Strauss, H., 362
 Strauss, W., 178
 Strauss, W. A., 461
 Streetman, J. R., 411
 Strehler, B., 361, 367
 Strehlow, H., 252
 Streiff, H. J., 139
 Streitwieser, A., Jr., 175
 Strelkov, P. G., 9, 10, 12
 Strel'nikov, A. A., 9
 Streng, A. G., 459
 Strepikheev, A. A., 13, 16, 17, 18
 Strickland-Constable, R. F., 468
 Strittwater, R. C., 9
 Strom, P. O., 303
 Strömme, K. O., 40, 41, 42, 368
 Strutt, R. J., 148
 Stuart, A. A. V., see Verrijn Stuart, A. A.
 Stull, D. R., 8, 13, 14, 16, 17, 18, 239, 469
 Sturm, W. J., 426
 Sturtevant, J. M., 1-30; 2, 3, 5, 6, 7, 12, 13, 15, 193, 206, 207, 211
 Styrikovich, M. A., 468
 Suchardt, G., 177
 Sucher, J., 426
 Sugawara, T., 448
 Sugden, T. M., 461, 467
 Suhrmann, R., 88, 89, 367
 Sukava, A. J., 233
 Sukhomlinov, A. K., 358
 Sullivan, E., 193, 207
 Sullivan, J., 459
 Sullivan, J. O., 55, 149
 Sullivan, R. J., 280
 Sumida, W. K., 230
 Sumitomo, H., 108
 Sundheim, B. R., 273
 Sunner, S., 4, 5, 9, 11, 15, 17
 Suryanarayana, C. V., 264
 Suryanarayana, V., 366
 Suss, Yu. M., 360
 Susz, B. P., 179
 Sutcliffe, L. H., 289, 355, 447
 Sutherland, G. K., 357
 Sutton, H. C., 292
 Sutton, J. R., 1
 Sutton, L. E., 31, 389, 390
 Suzuki, H., 464, 470
 Suzuki, M., 5, 15, 18
 Suzuki, S., 175
 Suzuki, T., 361
 Svec, H. J., 464
 Svede-Shevts, N. I., 458
 Svendsen, S. R., 46
 Svensson, G., 360
 Sverdlin, A. S., 12, 15
 Swain, C. G., 172, 175, 178
 Swalen, J. D., 37, 404
 Swallow, A. J., 289-330; 293, 299, 302
 Swanson, J. W., 79
 Swanson, S. A., 206
 Swanwick, J. D., 17
 Swenson, C. A., 10
 Swick, D. A., 37
 Swinbourne, E. S., 59
 Sybertz, W., 79
 Sykes, K. W., 9, 83
 Symons, M. C. R., 159, 160, 161, 169, 442, 443
 Syrkin, Ya. K., 177, 369
 Syruczek, E., 209
 Szabo, Z. G., 86
 Szasz, G. J., 38, 39
 Szathmáry, J., 77
 Szego, G. C., 145
 Székely, Gy., 78, 81
 Szent-Györgyi, A., 366
 Szigetváry, G., 81
 Szonyi, G., 470
 Szönyi, S., 78
 Szutka, A., 298
 Szwarc, M., 54, 117

 T
 Taber, H. W., 352
 Tabuchi, D., 14, 40, 170
 Taft, R. A., 169, 177
 Taft, R. W., Jr., 350
 Tagantsev, K. V., 89
 Tajima, M., 313
 Takahashi, A., 400
 Takahashi, J., 175
 Takahashi, N., 92, 228, 463
 Takaishi, T., 83
 Takatsugi, H., 108
 Takenaka, Y., 212
 Takeyama, T., 463
 Taki, S., 468
 Tal'roze, V. L., 363
 Tanaka, J., 359
 Tanaka, K., 467
 Tanaka, S., 94
 Tanaka, T., 463
 Tanaka, Y., 149, 355
 Tanford, C., 191, 202, 203, 206, 211
 Taniguchi, T., 11, 14, 17
 Tannenbaum, E., 34
 Tannenwald, P. E., 409
 Tanner, D. D., 181
 Tanner, D. W., 366
 Tanner, K. N., 392
 Tannhauser, D. S., 418
 Tantilla, W. H., 449
 Tapley, J. G., 442, 443
 Tappel, A. L., 299
 Tarassov, V. V., 11
 Tarmy, B. L., 291
 Tarrago, G., 361
 Tarrago, X., 292, 296
 Tataevskii, V. M., 467
 Tate, P. A., 34
 Tatevskij, V. M., 43, 355
 Taylor, A., 227
 Taylor, A. E., 125
 Taylor, C. R., 311
 Taylor, E. H., 147, 148, 461
 Taylor, G. W., 70
 Taylor, H. A., 84
 Taylor, H. F. W., 467
 Taylor, J. L., 227
 Taylor, R. G., 9, 11, 12, 238
 Taylor, R. L., 60, 467
 Taylor, W. C., 184
 Taylor, W. J., 466

- Teale, F. W. J., 361, 365, 367
 Tedder, J. M., 60
 Tees, T. F. S., 5
 Teitel, R. J., 229
 Teller, E., 461
 Teltschik, W., 9
 Templeton, D. H., 228
 Templeton, J. F., 363
 Teodorescu, L., 179
 Terao, N., 424
 Terenin, A. N., 89, 179
 Terent'yev, A. P., 360
 Terhune, R. W., 398
 Termini, J. P., 136
 Terminiello, L., 210
 Tertian, L., 424
 Terwordt, L., 411
 Teuple, M., 15, 18
 Tevlina, A. S., 128
 Teyssie, P. L., 110
 Thacher, H. C., 145
 Thakar, M. S., 139
 Thelmer, O., 459
 Thirunamachandran, T., 357
 Thode, E. F., 79
 Thom, H. G., 439
 Thoma, R. E., 234, 238
 Thomas, D. G., 78, 82, 419
 Thomas, D. K., 263
 Thomas, D. V., 459
 Thomas, D. W., 361
 Thomas, G. O., 263
 Thomas, J. K., 315
 Thomas, P. J., 59
 Thomas, W., 458
 Thomas, W. J. O., see
 Orville-Thomas, W. J.
 Thommen, K., 428
 Thompson, D. D., 63
 Thompson, S. O., 290, 291
 Thompson, W. M., 467
 Thonemann, P. C., 461
 Thorn, R., 463
 Thorn, R. J., 10, 238, 462
 Thorndike, A. M., 399
 Thorp, A. G., 228
 Thorp, N., 279
 Thorpe, R. E., 301
 Thorson, W., 349
 Thring, M. W., 470
 Thrush, B. A., 58, 61
 Thun, R., 94
 Thwaite, R. D., 230
 Thyagarajan, B. S., 169
 Tian, A., 3, 7
 Tibbs, S. R., 333, 344
 Tiedema, T. J., 228
 Tiers, G. V. D., 175, 448
 Tiggelen, A. van, 461, 464
 Tillieu, J., 332, 333, 335
 Tillotson, M. J. L., 14
 Timasheff, S. N., 206
 Timmermans, J., 280
 Timofeev, D. P., 77
 Tipper, C. F. H., 11, 70, 289
 Tiselius, A., 192
 Tjomsland, O., 45, 46
 Tobias, R. S., 254
 Tobin, M. C., 46
 Tobinaga, S., 447
 Todd, S. S., 14
 Toennies, J., 461
 Togawa, H., 362
 Tolberg, R. S., 62, 63, 65
 Tollin, G., 361, 366, 367
 Tolmachev, V. N., 13, 369
 Tolmachev, V. V., 248
 Tolstikov, G. A., 363
 Tombacz, E., 358
 Tomita, K., 448
 Tomizuka, C. T., 419
 Tompkins, F. C., 38
 Toms, D., 307
 Tong, L. K. J., 5
 Topchiev, A. V., 12, 16, 301
 Tosi, M. P., 411, 417
 Touchstone, J. G., 366
 Towle, L. T., 226
 Townsend, R., 206
 Townes, C. H., 34, 158, 466
 Townsend, J., 338
 Townsend, M. G., 159, 160, 161, 442, 443
 Toye, T. C., 284
 Toyoda, K., 363
 Trachtenberg, E. N., 171
 Trætteberg, M., 33, 39, 353
 Trail, M. M., 359
 Trambarulo, R., 34, 355
 Trammel, G. T., 147, 443
 Trapeznikova, O. N., 15, 16
 Trapnell, B. M. W., 83, 84
 Traynard, P., 3, 7
 Treanor, C. E., 465
 Trefonas, L., 45
 Trenwith, A. B., 70
 Treumann, W. B., 256
 Trevorrow, L. E., 10
 Trifan, D. S., 363
 Trillat, J. J., 307, 424, 464
 Tripp, H. P., 469
 Trischka, J. W., 396
 Troitskaja, N. V., 43
 Trombe, F., 459
 Trompette, J., 94
 Trost'yanskaya, E. B., 128
 Trotman-Dickenson, A. F., 53-76; 56, 57, 58, 69, 71, 146
 Trullio, J. G., 345
 Trumbore, C. N., 292
 Trumper, J. T., 137
 Trümpier, G., 94
 Tsubomura, H., 358, 369
 Tsuchida, R., 260
 Tsuchikura, H., 92
 Tsuno, S., 358, 365
 Tsuzuki, T., 14, 15, 18
 Tsvetkov, Yu. D., 304
 Tuck, D. G., 81, 82
 Tuck, J. L., 461
 Tucker, R. F., Jr., 443
 Tucker, R. N., 87, 416
 Tuckerman, M. M., 138
 Tundo, A., 356, 363
 Turkdogan, E. T., 225
 Turkevich, J., 87
 Turnbull, D., 284, 419, 421
 Turnbull, J. H., 361
 Turner, D. T., 108, 312, 318
 Turner, D. W., 71, 355
 Turner, E. B., 460
 Turner, J. J., 447
 Turner, R. B., 4, 13, 14, 15, 16, 18
 Turney, T. A., 260, 362
 Turnquest, B. W., 183
 Turizumi, A., 79
 Tuttle, T. R., Jr., 171, 339, 354, 436, 437
 Tuzi, Y., 78, 84
 Tweet, A. G., 421
 Tyablikov, S. V., 248
 Tyke, F. L., 170
 Tykodi, R. J., 77
 Tyler, W. W., 416
 Tyrrell, E., 4, 5
 Tyrrell, H. J. V., 8, 256, 257
 Tyurin, I. I., 458
- U
- Ubbelohde, A. R., 5
 Ueberle, A., 357
 Ueberfeld, J., 90, 450
 Ueta, M., 414
 Ul'yanova, O. D., 17
 Ulybin, S. A., 8
 Unterberger, R. R., 443
 Uny, C., 93
 Uphoff, W., 10
 Urbain, G., 470
 Urbafski, T., 356, 363
 Urch, D. S., 357
 Urey, H. C., 145, 147
 Uri, H., 302
 Ursell, H. F., 275
 Urwin, J. R., 113, 115
 Usyskin, I. D., 42
 Usitalo, E., 11, 17, 369
- V
- Váhala, J., 79
 Vainstein, B. K., 42, 43
 Vale, R. L., 111, 119
 Valieau, J. P., 283
 Van Artsdalen, E. R., 10
 van der Meij, P. H., see
 Meij, P. H. van der
 Vanderslice, J. T., 469

- Vanderslice, T. A., 62
 van der Waals, J. H., see
 Waals, J. H. van der
 van Dranen, J., see Dranen,
 J. van
 Van Dyken, A. R., 302
 van Eck, C. L. van P., see
 Panthaleon van Eck, C. L.
 van
 Van Ermen, L., 138
 Vanfleet, H. B., 416
 van Holde, K. E., see
 Holde, K. E. v.
 van Hove, L., see Hove, L.
 van
 van Itterbeek, A., see
 Itterbeek, A. van
 Vankataram, B., 338
 van Kranendonk, J., see
 Kranendonk, J. van
 van Panthaleon van Eck, C.
 L., see Panthaleon van
 Eck, C. L. van
 van Reijen, L. L., see
 Reijen, L. L. van
 van R. Smit, J., see Smit,
 J. van R.
 van Steveninck, A. W. de
 R., see Ruyter van
 Steveninck, A. W. de
 Van Tamelén, E. E., 447
 Van Tassel, R., 257
 Van Thiel, M., 157
 van Tiggelen, A., see
 Tiggelen, A. van
 Van Vleck, J. H., 331, 332
 Van Voorhis, J. J., 81
 Varadachari, R., 14, 15,
 16
 Varfolomeyeva, V. N., 366
 Varley, J. H. O., 464
 Varma, S., 170
 Varsanyi, G., 356
 Vasilievskii, K. I., 9, 11
 Vasilyev, A. A., 128, 129
 Vaska, L., 89
 Vassian, E. G., 256
 Vaughan, W. E., 2, 3, 4
 Vautier, C., 93
 Veazie, A. E., 176
 Vedam, K., 9, 10
 Vedder, W., 404
 Vegard, L., 145, 147, 149,
 152
 Velts, I. V., 461
 Vekshina, N. V., 470
 Venkatachalam, K. A., 333
 Venkataraman, B., 437,
 441
 Venkatesan, V. K., 264
 Venkateswaran, C. S., 260
 Verbeke, G., 149
 Verdier, P. H., 37, 404
 Verduch, A. G., 220, 224
 Vereshchagin, L. F., 460,
 467
 Vereshchinskii, V., 298
 Verhoek, F. H., 258
 Verkade, P. E., 356
 Verma, G. S., 265
 Verma, S. M., 362
 Vermilyea, D. A., 422, 423
 Vernon, C. A., 169
 Verrijn Stuart, A. A., 170,
 362
 Vertsner, V. N., 94
 Verwey, E. J. W., 258
 Vest, R. W., 10, 11
 Victor, A. C., 10
 Vila, L. C., see Carbonell
 Vila, L.
 Vilkov, L. V., 43, 44, 355,
 467
 Villars, D. S., 469
 Vink, H. J., 411
 Vinnik, M. I., 176
 Vintaikin, E. Z., 238
 Vishnevskii, L. D., 368
 Visnevskaya, M. M., 13,
 14
 Visser, H., 356
 Vitali, T., 357
 Vleeskens, J. N., 84, 91
 Vodar, B., 396
 Voevodski, V. V., 304
 Vogel, W., 279
 Vojta, G., 450
 Volchenkova, Z. S., 470
 Volkenshtein, F. F., 82,
 85
 Volkova, V. S., 363
 Volokhina, A. V., 13, 16,
 17, 18
 Volpi, G. G., 58, 61
 Volpin, M. E., 171
 Voltz, S. E., 69
 Völz, H. G., 9, 238, 466,
 468
 von Arnim, E., see Arnim,
 E. von
 von E. Doering, W., see
 Doering, W. von E.
 Von Elbe, G., 146, 158
 von Helmholtz, H., see
 Helmholtz, H. von
 von Stackelberg, M., see
 Stackelberg, M. von
 Voreck, W. E., 458
 Vorobev, A. A., 415
 Voronova, A. A., 43
 Vyroubal, C., 79

 W
 Waack, R., 117
 Waals, J. H. van der, 10,
 18, 171, 277, 280, 354,
 362, 447
 Wada, A., 193, 196, 197
 Wada, T., 464
 Waddington, D. J., 70
 Waddington, F. B., 306,
 309
 Waddington, G., 10, 12, 14,
 16, 17
 Waddington, T. C., 89, 367
 Wade, K., 6
 Wade, W. R., 459
 Wadsö, I., 4, 5, 9, 11, 12,
 14, 15, 17
 Wadsworth, M. E., 464
 Wadsworth, P. A., 363
 Wagenknecht, F., 362
 Waggner, W. G., 260
 Wagner, C., 220, 221, 224,
 423, 424, 464
 Wagner, C. D., 301, 363
 Wagner, W., 14, 15
 Wahler, B. E., 439
 Wainoff, G., 10
 Waite, T. R., 422
 Wajda, E. S., 277
 Wajszel, D., 464
 Wakefield, Z. T., 259
 Wakeman, D. W., 277
 Waki, H., 136
 Walba, H., 15
 Walden, C., 5
 Waldron, M. B., 230
 Walker, B. E., 10
 Walker, R. M., 425
 Wall, F. T., 54, 264, 265
 Wall, J. G. L., 131
 Wall, L. A., 148, 150, 151,
 155, 159, 310
 Wallace, W. E., 10, 226
 Wallenberger, F. T., 357,
 363
 Walling, G., 145
 Walling, J. F., 277
 Wallman, J. C., 445
 Walsh, A. D., 393
 Walsh, J. R., 356, 357
 Walsh, P. N., 466
 Walter, R. I., 137
 Walters, W. D., 59
 Walther, J. E., 283
 Walton, G. N., 303
 Walton, H. F., 123-44
 Waly, A., 293
 Wang, J. H., 261
 Wang, S. I., 361
 Ward, J. O., 292
 Ward, L., 459
 Ward, R. B., 442
 Ward, R. L., 339, 392,
 439
 Ward, S., 461
 Wardlaw, W., 263
 Ware, A. A., 458, 461
 Warhurst, E., 57
 Warner, R. C., 193, 205,
 206, 212
 Warschauer, D. M., 414
 Wartenpohl, F., 10
 Wartik, T., 10
 Washburn, E. R., 281
 Washburn, J., 470
 Wasserburg, G. J., 468
 Wassermann, A., 362
 Wassermann, E., 363

- Watanabe, H., 444
 Watanabe, K., 355
 Watanabe, M., 313, 463
 Watanabe, T., 309
 Watelle-Marion, G., 256
 Waterman, T. E., 8
 Waters, W. A., 105, 112, 169
 Waterstrat, R. M., 227
 Watkins, G. D., 444
 Watkins, I. W., 321
 Watkins, S. R., 138
 Watson, D., 173
 Watson, G. M., 281
 Watson, W. F., 116
 Watson, W. W., 283
 Waugh, D. F., 207
 Waugh, J. S., 170, 448
 Weaver, C., 94
 Weaver, H. E., 146, 444, 448
 Webb, M. B., 422
 Webb, W., 18, 280, 284
 Webb, W. W., 422, 464
 Weber, B. C., 467
 Weber, G., 365, 387
 Weber, I., 205
 Wechsler, M. T., 5
 Wechter, W. J., 357
 Wedler, G., 88, 89
 Weeks, B. M., 292, 298
 Wegener, P. P., 57
 Weger, M., 444
 Wehner, G. K., 427, 428
 Weigl, J. W., 361, 367
 Wejland, W. P., 362
 Weil, J. A., 354
 Weinmann, J. L., 363
 Weinreb, A., 367
 Weinstein, A. H., 357
 Weinstein, F., 173
 Weinstock, B., 8, 349, 368
 Weir, A., Jr., 461
 Weis, J., 260
 Weise, E., 10
 Weiser, R., 238
 Weisfeld, L. B., 177
 Weiss, A., 126
 Weiss, J., 47, 292, 296, 310, 445
 Weissbart, J., 464
 Weissman, H. B., 13, 14
 Weissman, S. I., 171, 338, 339, 354, 363, 364, 365, 392, 436, 437, 438, 439, 440, 441
 Welbon, W. W., 136
 Weller, A., 365, 367
 Weller, S. W., 84, 89
 Wells, A. J., 399
 Wells, C. J. H., 56, 69
 Wells, R. A., 127, 130, 137
 Welsbach, H. A., see Auer-Welsbach, H.
 Welsh, H. L., 396, 397, 398
 Welsh, N. C., 94
 Weltner, W., 332, 333
 Wen, W.-Y., 250
 Wentink, T., 55, 149
 Wentorf, R. H., Jr., 460, 467
 Wenzel, A., 354
 Wepster, B. M., 169, 356
 Werber, T., 464
 Wernick, J. A., 229
 Wertz, J. E., 146
 Wesp, G. L., 111
 Wessling, B. W., 137
 Wesson, J. A., 461
 Westbrook, R. D., 458
 Westfall, W. M., 131, 137
 Westheimer, F. H., 169
 Westmacott, K. H., 416
 Weston, K. C., 469
 Weston, N. E., 226
 Westphal, U., 361
 Westrum, E. F., Jr., 8, 9, 10, 223, 237
 Wetlaufer, D. B., 212
 Wetstone, D. M., 134
 Wey, R., 126
 Weygand, F., 174
 Whaley, H. A., 447
 Whalley, E., 12, 178
 Whapham, A. D., 426
 Wheatley, K. H., 79, 80
 Wheatley, P. J., 31
 Wheeler, O. H., 18
 Wheeler, R. C., 467
 Whiffen, D. H., 31, 161, 169, 306, 313, 314, 392, 435, 442, 443, 446
 White, A. G., 259
 White, D., 10, 11, 126, 466
 White, E. F. T., 114
 White, J. F., 468
 White, J. L., 223, 470
 White, P., 266
 White, R. W., 467
 White, T. R., 13, 17
 White, W. B., 358
 Whitting, M. C., 4
 Whitley, A., 260
 Whittaker, B., 322
 Whittaker, D., 459
 Whittenberger, R. T., 118
 Whittle, E., 157
 Whorton, R., 263
 Wiberg, K. B., 34, 56, 173, 176
 Wiberley, S. E., 12
 Wick, G. C., 332
 Wickersheim, K. A., 404
 Wiedemeier, H., 12, 467
 Wiederkehr, R. R., 281
 Wijnen, M. H. J., 58, 62, 63, 66, 68
 Wilde-Delvaux, M. C. de, 359
 Wilen, S. H., 173
 Wiley, D. W., 4
 Wiley, R. H., 127, 302, 447
 Wilhelm, M., 172
 Wilhoit, E. D., 263
 Wilken, P. H., 173
 Wilkinson, G. R., 91
 Wilkinson, M. K., 467
 Wilkinson, P. G., 355
 Willard, J. E., 160, 161, 304, 423
 Williams, A. A., 256
 Williams, E. J., 211
 Williams, G., 14, 180
 Williams, G. H., 169
 Williams, G. I., 467
 Williams, G. P., 419
 Williams, H. L., 113
 Williams, L., 6
 Williams, M. C., 157
 Williams, R., 357, 364, 366
 Williams, R. B., 4, 439
 Williams, R. E., 448
 Williams, R. J. P., 254
 Williams, R. K., 11
 Williams, R. L., 282
 Williams, R. O., 227
 Williams, R. R., 291
 Williams, R. V., 461
 Williams, T. F., 307, 308, 310
 Williamson, G. K., 230, 467
 Willis, B. T. M., 426
 Willis, H. H., 125
 Willman-Johnson, B., 138
 Wilman, H., 94
 Wilmshurst, B. R., 15
 Wilson, D., 116
 Wilson, D. J., 59
 Wilson, E. B., Jr., 37, 38, 39, 352, 391, 399, 404, 405
 Wilson, J. R., 304, 423
 Wilson, K. R., 59
 Wilson, M. K., 389, 400
 Wilson, S., 299
 Wilson, T. B., 56
 Wilson, T. P., 16, 17
 Wilson, W. B., 229
 Wilzbach, K. E., 290
 Winchester, L. J., 469
 Windsor, M. W., 365
 Winer, A. D., 361
 Wing, A. B., 47
 Winkler, C. A., 61, 148, 149, 158
 Winkler, G., 259
 Winkler, R. E., 4
 Winsauer, K., 355
 Winslow, G. H., 462
 Winstein, S., 172, 175
 Winter, E., 467
 Winter, E. R. S., 85
 Winter, J. M., 449
 Wippler, C., 310
 Wirth, H. E., 10

- Wirth-Lindemann, F. C., 276
 Wise, H., 461
 Wisely, H. R., 458
 Wishaw, B. F., 262
 Wishnia, A., 206
 Wisnyi, L. G., 470
 Wisseroth, K., 353
 Witte, L. de, 92
 Wittels, M. C., 425
 Wittig, E., 9
 Wittwer, E. E., 332
 Witzmann, H., 136
 Woermann, D., 127
 Woessner, D. E., 449
 Wolf, H. C., 366, 367
 Wolf, I., 367
 Wolf, K. L., 92
 Wolf, L., 137
 Wolfe, J. K., 467
 Wolff, W., 276
 Wolfhard, H. G., 461
 Wolinsky, J., 447
 Wolken, J. J., 351
 Wolkenstein, T., 83, 86
 Wolsky, S. P., 92, 429
 Wolten, G. M., 232
 Wong, C., 44
 Wong, E., 444
 Woo, L. F., 296
 Wood, E. A., 227
 Wood, J. A., Jr., 468
 Wood, R. H., 8, 253, 259
 Wood, R. W., 146
 Woodruff, T. O., 413
 Woods, P. H., 130
 Woods, R. J., 296
 Woodstock, S. H., 459
 Woodward, A. E., 113, 197, 307, 311
 Woodward, R. B., 170
 Woolfolk, R. W., 63
 Woolmington, K. G., 255
 Worrall, R., 316, 317
 Worsfold, D. J., 16
 Wortman, R., 91
 Wotring, D., 231
 Wray, K. L., 55, 149
 Wright, A. N., 61
 Wright, G. A., 260, 362
 Wright, R. S., 138
 Wright, W. B., 48
 Wrigley, H. E., 249, 258
 Wu, Y. C., 259
 Wulff, J., 227
 Wulff, V. J., 366
 Wulfman, C. E., 353, 357
 Wunderlich, B., 16
 Wurster, W. H., 461, 465
 Wyatt, P. A. H., 253, 259
 Wycherley, V., 319, 320
 Wyckoff, H., 48
 Wyller, A. A., 459
 Wyluda, B. J., 448
 Wyman, G. M., 366
 Wynne-Jones, W. F. K., 443
- Y
- Yalman, R. G., 233, 468
 Yamada, S., 260
 Yamagata, Y., 448, 449
 Yamaguchi, I., 447
 Yamaguchi, M., 357
 Yamaguchi, S., 94
 Yamamoto, A. S., 226
 Yamana, S., 362
 Yamatera, H., 136
 Yamauchi, T., 470
 Yamazaki, H., 302, 367
 Yamazaki, M., 344
 Yang, A. C., 91
 Yang, J. T., 196, 197, 206, 211, 349, 350, 362
 Yang, L., 462
 Yankwich, P. E., 176
 Yarrington, R. M., 16, 17
 Yarwood, J., 463
 Yasaitis, E. L., 148, 159
 Yates, D. J. C., 88, 91
 Yates, K., 18
 Yates, P., 359
 Yatsimirskii, K. B., 368
 Yearlan, H. J., 464
 Yegorova, Z. S., 356, 363
 Yeh, S.-J., 360
 Yemel'yanov, N. P., 355
 Yerofeev, B. V., 355
 Ylstra, J., 361
 Yoda, E., 463
 Yokohama, Y., 137
 Yoneda, Y., 127
 Yonezawa, T., 356
 Yorke, R. W., 448
 Yoshimura, Y., 136
 Yoshino, Y., 137
 Yoshizumi, H., 334, 349, 352
 Yost, D. M., 34, 150
 Yost, H. T., 298
 Young, F. W., Jr., 464
 Young, G. J., 80, 91
 Young, H. L., 178
 Young, J. R., 60
 Young, L., 94
 Young, R. A., 149
 Young, T. F., 259
 Young, W. G., 181
 Yuan, C., 362
 Yul, N., 18, 254
 Yuster, P. H., 413
 Yvon, J., 276
- Z
- Zabetakis, M. G., 461
 Zachariassen, H., 45, 46
 Zalevsky, N. I., 79
 Zalkin, A., 225
 Zalman, M., 180
 Zandberg, E. Ia., 89
 Zanker, V., 358, 360
 Zansokhova, A. A., 294
 Zapior, B., 129
 Zaplatynskiy, J., 420
 Zarzycki, G., 467
 Zavaritskii, N. V., 9
 Zaverina, E. D., 77, 78
 Zavitsanos, P., 233, 465
 Zechmeister, L., 178
 Zell, W., 353
 Zein-Eldin, Z. P., 361
 Zeiss, H. H., 369
 Zeldes, H., 147, 148, 159, 443
 Zelinskii, V. V., 365
 Zellars, G. R., 222
 Zeltmann, A. H., 295
 Zemansky, M. W., 10
 Zeman, P. D., 136
 Zemel, J., 89, 93
 Zener, C., 277
 Zengin, N., 402
 Zettlemoyer, A. C., 126
 Zharkova, L. A., 10
 Zhdanov, S. P., 78, 91
 Zheldukhin, D. V., 464
 Zhevandrov, N. D., 366
 Zhidkova, Z. V., 360
 Zhilenov, I. V., 91
 Ziegenbalg, S., 257
 Zima, G. E., 464
 Zimm, B. H., 118, 193
 Zimmerman, H. K., Jr., 14, 254
 Zimmerman, J., 304, 442
 Zimmerman, J. R., 90, 176, 449
 Zink, J., 8
 Zisman, W. A., 94
 Zitter, R. N., 229
 Ziv, D. M., 301
 Zlotnick, M., 463
 Zmerli, A., 366
 Zobian, D., 123
 Zoller, H., 227
 Zollinger, H., 173
 Zorin, Z. M., 90, 92
 Zotova, S. V., 356
 Zuh, H. F., 38, 39
 Zuko, V. D., 12, 15, 16, 17
 Zvonkova, Z. V., 368
 Zwietering, P., 84
 Zwolinski, B. J., 252

SUBJECT INDEX

A

- Absorption coefficient
 - of hydrogen calculation of, 398-99
- Abstraction reaction
 - kinetics of, 62-63
- Accepladiylene ion
 - spin resonance of, 436
- Acetaldehyde
 - rotation barrier of, 405
- Acetate complex
 - dissociation constants of, 256
- Acetic acid
 - phosphorescence of, 365
 - radiolysis of, 290
- Acetolysis
 - isotope effect and, 175
- Acetone
 - irradiation of, 161
 - photolysis of, 57-58, 65
- Acetylacetone
 - chelation and, 369
- Acetylene
 - derivatives of
 - bond distance and, 34
 - polymerization of, 67, 290
 - photosensitized, 64
 - proton screening and, 337
 - synthesis of, 467
 - transitions of, 355
- Acetyl radical
 - production of, 68
- Acetylsalicylic acid
 - hydrolysis of, 181-82
- Acid
 - solvation and, 252-53
 - weak
 - acidity function and, 176
 - dissociation constants of, 253-54, 255
- Acidity function
 - measurement of, 176-77
- Acridine
 - excitation of, 367
 - fluorescence of, 366
 - spectra of, 358
- Acridone
 - fluorescence of, 366
 - spectra of, 359
- Acrylonitrile
 - polymerization of, 316
- Actin
 - ion binding of, 205
- Activity
 - coefficient
 - of electrolytes, 257-58
 - of multicomponent systems
 - electromotive force and,
- 220-21
 - vapor pressure and, 221-24
- Acyclic system
 - rotational barriers and, 170
- Addition compound
 - molecular structure of, 40-42
- Adenosine phosphate
 - radiolysis of, 299
- Adrenalin
 - fluorescence of, 366
- Adsorbed layer
 - properties of, 90-92
- Adsorbent
 - adsorbent interaction and, 87-90
 - surface area of, 79
- Adsorption
 - catalysis and, 85-87
 - chemical, 82-85
 - diffusion and, 92
 - physical, 77-82
 - polarized light and, 90
 - spectroscopy and, 90-91
 - theories of, 79-80
- Air
 - dissociation of, 461
 - at high temperatures, 469
- Alanine
 - irradiation of, 161
- Albumin
 - expansion of, 206
 - heat of interaction of, 7
 - helical structure of
 - disulfide bonds and, 212-13
 - hydrogen bonds in, 211
 - ion binding of, 204, 205-6
 - tyrosyl ionization and, 204
- Alcohol
 - dehydrogenation of, 86, 87
 - iodine and
 - spectroscopy on, 282
 - polyhydric
 - ion exchange of, 132
 - radicals from, 160-61
 - spin resonance of, 441, 442
 - radiolysis of, 290
 - ternary systems of, 281
 - see also Ethanol; and specific alcohols
- Aldehyde
 - electronic spectra of, 359
 - irradiation of, 161
 - photolysis of, 65
- Alicyclic system
 - internal rotation of, 170
- Aliphatic compound
 - radicals of
 - spin resonance of, 441-42
- Alkali halide
 - color centers in, 412-14
 - condensation of, 462
 - conductance of, 263-64
 - dislocations in, 415-16
 - at high temperatures
 - thermodynamic properties of, 469, 470
 - point defects in, 411
 - radiolysis of
 - solid state and, 423
 - vapor composition of, 221-22
 - whiskers of, 422
- Alkali metal
 - halide systems of, 234
 - vaporization of, 236-37
- hydroxides of
 - vaporization of, 238, 239
- ion exchange of, 125, 129
- Alkaline earth metal
 - binary systems of, 226-27
 - hydroxides of
 - vaporization of, 239
 - ion exchange of, 125, 129
 - oxide systems of, 231
- Alkaloid
 - electronic spectra of, 361
 - ion exchange of, 138
- Alkane
 - adsorption of, 80, 81
 - binary mixtures of, 280
 - chemisorption of, 84
 - irradiation of
 - structure and, 301
 - radicals
 - spin resonance of, 441
- Alkene
 - radiolysis of, 301-2
- Alkoxy radical
 - decomposition of, 68
- Alkyl acetate
 - radiolysis of, 303
- Alkylation
 - Friedel-Crafts reaction and, 178-80
 - positioning in, 172
- Alkyl ester
 - photolysis of, 65-66
- Alkyl halide
 - decomposition of, 59
 - radiolysis of, 302, 304
- Alkyl radical
 - electron spin density and, 340

- isomerization of, 67
rate constants and, 58
- Allene**
bond distance in, 33
- Alloy**
activities of, 219, 220-21
of alkaline earth metals, 226-27
critical opalescence and, 410
critical phenomena and, 276-77
diffusion in, 418
entropy of mixing and, 219
at high temperatures
thermodynamic properties of, 470
nucleation and, 421
oxidation of, 424
resonance shifts in, 448
thermodynamic properties of, 277
of transition metals, 227-28
transport properties of, 284
vapor pressure and, 222-23
whiskers of, 422
- Allyl radical**
electron spin density and, 339, 340, 438
- Alumina**
whiskers of, 422
- Aluminosilicate**
as ion exchanger, 125
- Aluminum**
binary systems of, 227, 228, 230
ion exchange of, 131
nucleation of, 421
- Aluminum chloride**
Friedel-Crafts catalysis and, 178, 179
- Aluminum-gallium system**
phase diagrams of, 227
- Aluminum-zinc system**
critical phenomena and, 276-77
- Amide**
radicals from, 160-61
- Amide bond**
heat of hydrolysis of, 6
- Amide compound**
spectra of, 357
- Amidinium ion**
spectra of, 360
- Amine**
ion exchange of, 126
radicals from, 160
tertiary
polymerization and, 114
- Amino acid**
desalting of, 135
ion exchange of, 130, 138
irradiation of, 161
radicals from, 443
- radiolysis of, 298
spin resonance and, 304
- Amino radical**
formation of, 155-58
from hydrazine, 392
spin resonance of, 441
wave functions for, 344
- Ammonia**
adsorption of, 78, 81
decomposition of, 155-56
diffusion of
solid state and, 423
oxidation of, 461
synthesis of
high temperature and, 469
vibrational resolution of, 404
wave functions for, 344
- Amphoteric exchanger, 127**
- Aniline**
ion exchange of, 138
spectra of, 356
- Anion**
exchanger, 126-27
polyatomic
entropy and, 259
- Anisole**
spectra of, 356
- Anthracene**
conjugate acid of
structure of, 170-71
excited states of, 366
fluorescence of, 357, 366
photoconductivity of, 367
radiation protection and, 321
- Anthraquinone**
electronic spectra of, 359
- Antibody**
associations of
thermodynamics of, 207
heat of interaction of, 7
- Antigen**
antibody complex of, 207
- Antimony**
binary systems of, 228, 229
- Antimony trichloride**
spectroscopy on, 282
- Argon**
adsorption of, 78, 80, 81
excited nitrogen and, 152
in liquids, 281
solid solutions and, 277
- Aromatic compound**
electronic spectra of, 356-58
excited states of, 365-66
magnetic susceptibility of, 333-34
nuclear resonance of, 447
phosphorescence and, 364
proton coupling and, 342
proton screening and, 337
- Aromatic radical**
spin resonance and, 435-39
- Arsenic**
ion exchange of, 137
- Arsenite**
radiolysis of, 296
- Aryl compound**
electronic spectra of, 363
- Ascorbic acid**
dissociation constants of, 253
- Association constant**
of electrolytes, 256
- Atom**
quantum mechanical properties of, 342-43
- Aurocyanide ion**
ion exchange of, 130
- Aza-aromatic compound**
spectra of, 358
- Azobenzene**
acidity function and, 176
transitions of, 360
- Azo compound**
radiolysis of, 303
- Azoisobutyronitrile**
as polymer initiator, 105-6
- Azulene**
spectra of, 357

B

- Barium**
ion exchange of, 125
oxide systems of, 231
- Benzene**
acidity scale and, 177
adsorption of, 78, 80, 81
bond length in, 353
complexes of
structure of, 41-42
diamagnetic susceptibility of, 334
ditolyl and, 279
hydrogenation of, 85
ion
spin resonance of, 436
ionic aggregates in, 172
luminescence of, 365-66
nuclear resonance of, 447
polymerization of, 302
radiolysis of, 290, 297
spectroscopy on, 281, 282, 356
solvent effects and, 363
in vacuum, 364
- Benzoic acid**
as dosimeter, 321
heat of neutralization of, 259
radiolysis of, 297-98
- Benzonitrile**
spectroscopy on, 282
- Benzoquinone**
electronic spectra of, 359
- Benzophenone**
sodium ketyl of
spectrum of, 439

- Benzoyl peroxide
 as polymer initiator, 105-6
 Benzpyrene
 excited states of, 366
 Benzylamine
 ion exchange of, 138
 irradiation of, 161
 Beryllium
 ion exchange of, 137
 Blacetyl
 luminescence of, 365
 Binary system
 corresponding states and, 280
 gaseous
 radial distribution function and, 273-74
 metal
 phase diagrams of, 225-30, 234-35
 Biochemical process
 calorimetry and, 6-7
 Biphenyl
 electron spin density and, 339
 phosphorescence of, 357
 spectra of, 363
 Biradical
 reactions of, 68-69
 Bismuth
 binary systems of, 229-30
 vapor pressure of, 236, 237
 Bismuth-bromide system
 vapor pressure and, 222
 Bisulfate ion
 dissociation constant of, 254
 Block copolymer
 synthesis of, 112-17
 Bond angle
 of ethylene, 33
 Bond length
 of ethylene, 33
 reviews on, 350
 Bond strength
 radical formation and, 67-68
 Borane compound
 nuclear resonance of, 448
 structure of, 45
 Boron
 high temperature and, 468
 vaporization of, 237
 Boron halogenide
 structure of, 45
 Boron hydride
 structure of, 45
 Bromal hydrate
 radiolysis of, 296-97
 Bromide ion
 self diffusion of, 133
 Bromination
 kinetics of, 60
 Bromine
 complexes of
 charge transfer and, 368
 hydrate, 278
 ion exchange of, 130
 pyrolysis of, 57
 Butadiene
 bond length in, 353
 internal rotation and, 39
 Butatriene
 bond distance in, 34
 Butene
 isomerization of, 59
 oxidation of, 70
 reactivity of, 69
 Butyl fluoride
 internal rotation of, 38, 404
 Butyl phosphate
 radiolysis of, 302-3
 Butyric acid
 sound absorption of, 266
- C
- Cadmium
 ion exchange of, 137-38
 vapor pressure of, 223
 Calcite
 synthesis of, 468
 Calcium
 oxide systems of, 230, 231, 233
 Calorimetry, 2-7
 adsorption and, 80
 apparatus for, 3-4
 applications of, 4-7
 equilibrium constants and, 6
 kinetics and, 6
 methods in, 3-4
 molecular weights and, 6
 of organisms, 7
 oxygen atoms and, 154-55
 trapped radicals and, 146
 Camphor
 optical rotation and, 362
 Caproamide
 radical from, 442
 Caprolactam
 radical from, 442
 Carbide
 oxidation of, 464
 vaporization of, 237, 238
 Carbon
 in iron melts, 225
 Carbon dioxide
 adsorption of, 78
 chemisorption of, 83
 diffusion of, 283
 hydrogenation of, 85
 matrix heating and, 395
 spectroscopy on, 282
 Carbon disulfide
 adsorption of, 81
 irradiation of, 162
 synthesis of, 468
 vibrational intensities of, 401
 Carbon-hydrogen bond
 transition states and, 173
 Carbonium ion
 deaminations and, 181
 polymerization and, 109-10
 review on, 350
 spectra of, 362
 structure of, 170-71
 Carbon monoxide
 chemisorption of, 83, 84
 hydrogen and
 spectroscopy of, 281
 oxidation of, 86
 Carbon suboxide
 bond distance in, 34
 Carbon tetrachloride
 decomposition of, 467-68
 Carbonyl compound
 electronic spectra of, 358-59
 Carboxyhydroxy methyl radical
 trapping of, 442
 Carboxyl compound
 spectra of, 357
 Carcinogen
 electronic structure of, 361
 Carotene
 spectra of, 362
 Carotenoid
 energy transfer and, 361, 367
 Catalysts
 acid
 alkylations and, 179
 gas phase, 58
 Friedel-Crafts reaction and, 178-80
 heterogeneous, 85-87
 intramolecular, 181-83
 ion exchange and, 139
 radiation and, 296
 Catalyst
 electronic properties of, 85-87
 irradiation of, 317
 Cation exchanger, 127
 Cellulose
 irradiation of, 313
 phosphorylated
 as ion exchanger, 127
 Cement
 phase diagrams and, 230-31
 Ceramic
 diffusion and, 419-20
 ductility of, 470
 oxide
 phase diagrams of, 230-34
 thermal conductivity of, 470
 Ceric salt
 polymerization and, 109
 Ceric sulfate

- as dosimeter, 322
- Cerium
 - vaporization of, 237
- Cesium
 - ion exchange of, 125, 129
 - self diffusion of, 134
- Chain decomposition
 - gas kinetics and, 59-60
- Chain molecule
 - spectra of, 359-60
- Charcoal
 - catalysis and, 87
 - as ion exchanger, 127
 - radicals from, 443
- Charge-transfer complex
 - spectra and, 367-69
- Chelation
 - spectra and, 369
- Chemical reaction
 - Friedel-Crafts, 178-80
 - theory of
 - in gases, 53-54
- Chemiluminescence
 - of dyes, 365
- Chemisorption, 82-85
- Childe Harold
 - of Lord Byron
 - spectroscopy and, 395
- Chloride
 - ion exchange and, 130-31
 - metal systems of, 234-35
 - self diffusion of, 133
 - water radiolysis and, 295
 - see also Alkali halide;
 - Alkyl halide; Halide;
 - and specific chlorides
- Chlorination
 - kinetics of, 60
- Chlorine
 - to olefin, 66
 - oxides of
 - reactions of, 61-62
- Chlorine dioxide
 - irradiation of, 162
- Chlorine heptoxide
 - decomposition of, 57
- Chlorobenzene
 - pyrolysis of, 60
- Chloroethylene
 - chlorine addition and, 66
- Chloroform
 - radiolysis of, 302
- Chlorophyll
 - electronic spectra of, 360-61
 - energy transfer and, 367
 - excited states of, 366
- Choline chloride
 - radiolysis of, 305
- Chromatography
 - ion exchange
 - column, 135-36
 - paper, 138-39
- Chromic ion
 - paramagnetic resonance of, 444
- Chromium
 - activity of, 277
 - adsorption and, 87
 - binary systems of, 227
 - radiosensitivity of, 303-4
 - vaporization of, 237
- Chymotrypsin
 - mechanism of action of, 7
- Chymotrypsinogen
 - x-ray diffraction on, 200
- Clathrate
 - solid-gas systems and, 277-78
- Clay
 - as ion exchanger, 126
- Coal
 - sulfonation of, 128
- Cobalt
 - nuclear screening and, 336
- Collagen
 - denaturation of, 210
 - elastic properties of, 195, 198-99
- Color center
 - in alkali halides, 412-14
- Complex
 - charge-transfer, 367-69
 - of electrolytes, 253-57
 - ion pairs and, 254-55
 - ions
 - ion exchange and, 131-32
 - metal-organic, 369
- Compressibility
 - tabulated values of, 8-18
- Conalbumin
 - expansion of, 206
- Condensation
 - kinetics of, 462-63
 - vibrational intensities and, 400-1
- Condensed-vapor system, 235-39
 - molecular species in, 237-38
- Conductance
 - apparatus for, 261-62
 - dissociation constants and, 255
 - of electrolyte solutions, 261-64
 - high temperature and, 468, 469, 470
 - surface tension and, 262
 - thermal, 283
- Congruent mixture, 280
- Conjugated system
 - cyclopropanes, 171
 - electronic structure of, 352-54, 356-57
- Co-ordination compound
 - heat of formation of, 5-6
- Copolymer
 - block
 - radiation and, 317-19
 - synthesis of, 112-17
 - chemistry of, 103-22
 - graft
 - radiation and, 317-19
 - synthesis of, 103-12
 - see also Polymer; and Polymerization
- Copper
 - binary systems of, 227, 228
 - condensation of, 462
 - crystals containing
 - spin resonance and, 443-44
 - helium bombardment and, 416
 - ion exchange of, 130, 131
 - irradiation of, 425
 - nucleation of, 421
 - oxidation of, 424
 - point defects in, 411
 - sputtering of, 428
 - vaporization of, 237
 - whiskers of, 422
- Corresponding state
 - liquid mixtures and, 280
- Corrosion
 - solid state and, 423-24
- Corticosteroid
 - electronic structure of, 361
- Corundum
 - dislocations in, 416
- Countercurrent electromigration
 - isotope enrichment by, 264
- Critical phenomena
 - fluorocarbons and, 279
 - in nonelectrolyte solutions, 276-77
- Critical point
 - solid state and, 410-11
- Critical state
 - tabulated values of, 8-18
- Crosslinking
 - by radiation
 - polyethylene and, 305-6
 - of polymers, 310-12
 - theories of, 309-10
- Crystal
 - evaporation of, 463
 - field theory of, 368
 - spin resonance and, 444, 446
 - growth of, 420-22
 - orientation of
 - spin resonance and, 443
 - paramagnetic ions in, 443-46
 - structure
 - defects and, 411-16
 - dislocations in, 415-16
 - of polyethylene, 306-7
 - radiolysis and, 305
 - synthesis of, 467, 468
 - thermoelectric power and, 412
 - ultrasound and, 409-10
- Cupric salt
 - in organic acids, 259-60

- Cyanic acid
decomposition of, 156
dissociation constants of, 253
- Cyanine
electronic spectra of, 359, 360
- Cyclization
isotope effect and, 174-75
- Cycloalkane
nitrogen transfer and, 61
- Cyclobutadiene
existence of, 352
- Cyclobutene
isomerization of, 59
- Cyclohexadiene
electronic spectra of, 355
- Cyclohexadienone
electronic spectra of, 359
photochemical products of, 184-85
- Cyclohexane
irradiation of, 299-300, 301
radiolysis of, 293
- Cyclo-octatetraene
silver ion and, 42
- Cyclopentadiene
conductance and, 264
- Cyclopentane
oxidation of, 70
- Cyclopropane
conjugated systems of, 171
isomerization of, 56
- Cyclopropene
bond distance in, 34
- Cyclopropenyl ion
structure of, 171
- Cyclopropyl compound
structure of, 36
- Cysteine
radiolysis and, 304
- Cystine
radiolysis of, 298
- D**
- Dacron
see Polyethylene glycol terephthalate
- Deamination
nitrous acid and, 181
- Decarbonylation
acidity and, 177
- Defect
dislocations, 415-16
point, 411-14
- Denaturation
heat of, 6, 7
isotope effect and, 209
of nucleic acids, 6, 7, 299
optical rotation and, 362
of proteins
kinetics of, 208-9
thermodynamics of, 209-10
radiolysis and, 298, 299
- Density
of molten salts, 470
tabulated values of, 8-18
- Deoxyribonuclease
denaturation of, 209
- Deoxyribonucleic acid
denaturation of
calorimetry and, 6, 7
radiation and, 299
optical rotation and, 362
radiolysis of, 299
- Desorption
kinetics of, 81-82
- Deuterium
atomic
spin resonance and, 440
denaturation and, 209
in liquids, 281
substitution of
reaction rate and, 175-76
- Deuterium oxide
acid catalysis and, 173
- Deuterium sulfate
properties of, 260
- Dextran
radiolysis of, 297
- Diamagnetism
quantum theory and, 331-34
- Diatom molecule
quantum theory and, 343-44
- Diazomethane
photolysis of, 394
- Diazotization
kinetics of, 180-81
- Diborane
wave functions for, 344
- Di-t-butyl peroxide
decomposition of, 57
- 1,4-Dichlorobutylene-2
internal rotation of, 39
- Dielectric
absorption
point defects and, 412
relaxation
on nonelectrolyte solutions, 282
spectra and, 363
- Diffusion
adsorption and, 92
crystal imperfections and, 419-20
of electrolyte solutions, 264-66
ion exchange and, 132-34
sintering and, 420
in solids, 284, 416-20
irradiation and, 427
thermal
of ionic solutions, 265
transport properties and, 282-84
- Di-isopropyl ketone
as radical source, 67
- Diketopiperazine
structure of, 42-43
- Dilatometer
for congruent mixtures, 280
for high temperatures, 470
- Dimethoxybenzophenone
structure of, 47
- Dimethyl cadmium
decomposition of, 57
- Dimethyl mercury
decomposition of, 57
irradiation of, 161
- Dioxane
chloroform and, 278-79
conductance and, 263
- Diphenylpicrylhydrazyl
spectra of, 439
- Diphosphopyridine nucleotide
radiolysis of, 299
- Dipole moment
excited states and, 366
hydrogen interaction and, 397
- Dislocation
in crystals, 415-16
- Disproportionation
kinetics of, 63
- Dissociation constant
solubility and, 177
of weak acids, 253-54, 255
- Disulfide bond
protein structure and, 199, 212-13
- Dosimetry
radiation and, 321-22
- Double resonance, 449-50
- Ductility
of ceramics, 470
- Dyestuff
electronic spectra of, 359-60
fluorescence of, 366
hydrogen bonding and, 363
radiolysis of, 292-93
- Dysprosium
spin resonance of, 445
- E**
- Elasticity
fibrous proteins and, 194-95, 198-99
- Elastomer
radiation cure and, 312-13
- Electric discharge
of elements, 446-47
of oxygen, 395
- Electrochemistry
ion exchange and, 134-35
- Electrodialysis
ion exchange and, 135
- Electrolyte
complexes, 253-57
electromotive force meas-

- urement and, 220
 - equilibrium properties of, 247-61
 - ion exchange of, 129-32
 - ion pairs, 253-57
 - in nonaqueous solution, 257-58
 - nonequilibrium properties of, 261-66
 - reviews on, 259
 - solutions of, 247-72
 - molten, 260-61, 470
 - solvation of, 250-53
- Electromagnetic property of surface films, 92-93
- Electromotive force measurements of, 220-21
- Electron
 - unpaired
 - quantum theory and, 337-40
- Electron diffraction at high temperatures, 467
- Electronic spectra
 - nomenclature for, 354-55
 - of organic molecules, 349-88
 - reviews on, 349-51
 - theory of, 351-55
- Electron microscopy at high temperatures, 467
- of surfaces, 92
- Electron spin resonance, 435-47
 - of amino radical, 158
 - color centers and, 412-13
 - conjugated systems and, 353-54
 - excited molecules and, 391-92
 - of irradiated solids, 304-5
 - metal ions and, 443-47
 - of nitrogen, 150
 - nitrogen radicals and, 157
 - organic radicals and, 159-61
 - of oxygen atoms, 155
 - quantum theory and, 337-40
 - radical ions and, 171
 - radicals and, 435-43
 - sodium-ammonia solution and, 282
 - trapped radicals and, 146
- Electrophoresis
 - transference number and, 264
- Element
 - electric discharge of, 446-47
 - ion exchange separation of, 136-38
 - thermodynamic properties of, 8-10
 - see also specific elements
- Elimination reaction
 - isotope effect and, 174
- Emission spectra, 364-67
 - excited molecules and, 392
- Energy
 - of defect formation, 411
 - dissociation
 - tabulated values of, 8-18
 - see also Enthalpy; and Free energy
- Energy transfer
 - fluorescence and, 367
 - gas reactions and, 54-57
 - photosynthesis and, 361
- Enolization
 - isotopes and, 173
- Enthalpy
 - helix stability and, 197
 - of hydrogen bond formation, 193
 - of ion exchange, 129
 - polypeptide transitions and, 194-95
 - of surfaces, 92
 - tabulated values of, 8-18
- Entropy
 - configurational
 - polypeptide chains and, 195
 - of formation
 - of ion pairs, 255
 - helix stability and, 197
 - of ion exchange, 129
 - of mixing, 219
 - of solution, 281
 - fluorocarbons and, 279
 - tabulated values of, 8-18
- Enzyme
 - calorimetry and, 6, 7
 - chelation of spectra and, 369
 - denaturation of, 209
 - heat of hydrolysis and, 6
- Epinephrine
 - fluorescence of, 366
- Epoxidation
 - catalysis of, 139
- Equilibria
 - acid-base
 - protein structure and, 201-3
 - of binary metal systems, 225-30
 - condensed vapor, 235-39
 - molecular species in, 237-38
 - in electrolyte solutions, 247-61
 - heterogeneous, 219-46
 - at high temperatures, 469-70
 - of ion exchange, 129-32
 - of metal halide systems, 234-35
 - organic reactions and, 172-85
 - of oxide systems, 230-34
 - tabulated values for, 8-18
- Equilibrium constant
 - determination of calorimetry and, 6
- Erythrose
 - from irradiated glucose, 297
- Ester
 - irradiation of, 161
 - olefin elimination from, 59
 - radiolysis of, 303
- Esterification
 - heat of, 6
- Etch-pit pattern
 - crystal dislocations and, 416
- Ethane
 - conformation of, 170
 - decomposition of, 66, 160
 - oxidation of, 70
 - radiolysis of, 66, 290, 291
 - solubility of, 281
 - vibrational band intensities of, 399
- Ethanol
 - conductance and, 263
 - dehydrogenation of, 86
 - infrared spectroscopy on, 282
 - irradiation of, 161, 300
 - oxidation of, 70
- Ether
 - irradiation of, 161
 - radicals of
 - spin resonance, 441
 - radiolysis of, 302
- Ethylene
 - bond length in, 353
 - chemisorption of, 84
 - diffusion of, 283
 - hydrogenation of, 86
 - polymerization of, 290, 316
 - radiolysis of, 291, 296
 - structure of, 32-33
 - transitions of, 355
- Ethylene glycol
 - conductance and, 264
- Ethylene imine
 - decomposition of, 64
- Ethylene oxide
 - decomposition of, 461
- Ethyl fluoride
 - rotation barrier of, 405
- Ethyl formate
 - internal rotation of, 40
- Ethyl halide
 - internal rotation of, 38-39
- Ethyl radical
 - electron spin density and, 340
 - hydrogen abstraction by, 62
 - olefins and, 66-67
 - spin resonance of, 441
 - trapping of, 160
- Europium
 - vaporization of, 237
- Evaporation
 - kinetics of, 464-63

Excited state
chemistry of, 366-67
interactions and, 396-405
kinetics and, 64-66
vibration-rotation spectroscopy and, 391-96

Explosive
irradiation of, 303

F

Faraday effect
point defects and, 414
Fatty acid
radiolysis of, 303
spectra of, 355
Ferric ion
paramagnetic resonance of, 444
Ferrocene
internal rotation of, 170
spectra of, 369
Ferrous chloride
vapor composition of, 221
Ferrous sulfate
as dosimeter, 321
radiolysis of, 292, 293, 294-95

Fibrin
polymerization of, 7, 207
transitions of, 199

Fibrinogen
radiolysis of, 298
thrombin action and, 206

Field emission
adsorption and, 91

Film
spin waves and, 409
surface
properties of, 92-94

Flame
gas kinetics and, 461

Flash photolysis
gas kinetics and, 54-55
see also Photolysis

Flavone
electronic spectra of, 359

Fluorescein
spectra of, 360

Fluorescence
of aromatics, 366
efficiencies of, 365
energy transfer and, 367
polarization, 365, 366
anthracene and, 357

Fluoride
metal systems of, 234
vaporization of, 236-37
see also Alkali halide;
Alkyl halide: Halide;
and specific fluorides

Fluorocarbon
solutions of, 279
synthesis of, 467

Fluorosilane
rotation barrier of, 404

Formaldehyde

spectra of, 359
Formation constant
of electrolytes, 256
Formic acid
decomposition of, 86
structure of, 355
Formolysis
isotope effect and, 175
Free energy
denaturation and, 209-10
of formation
of amalgams, 258
binary compounds and, 220
tabulated values of, 8-18
of immersion, 81
of ion exchange, 129
of orientation
solvation and, 252
partial molar, 219
Free radical
see Radical and specific
radicals
Friedel-Crafts reaction,
178-80
Furan
spectra of, 355

G

Gallium
binary systems of, 227, 228

Gamma ray
color centers and, 413
hydrogen atom formation
by, 147-48
polymerization and, 108-9
radical formation and, 441
rubber crosslinking and, 199

Gas
binary mixture
theory of, 273-74
-condensed phase reactions, 224-25
-condensed vapor equilibria, 235-39

corrosion by
solid state and, 423-24
at high temperatures
kinetics and, 461-65
structure of, 465-67
thermodynamic properties of, 469
hydrates, 277-78

Inert
diffusion of, 283
radiation and, 290
solid solutions of, 277
solubilities of, 281
kinetics and, 53-76
in liquid, 281
metal and
reaction rates of, 464-65
from polyethylene irradi-

ation, 308-9
radiation and, 289-91
solid and
interactions of, 87-90
reaction rates of, 462-65
systems of, 277-78
spectra of
electric discharge and, 395
thermal conductance of, 283
transport properties of, 283
ultraviolet spectroscopy of, 355
viscosities of, 283
Gelatin
melting of, 199
Gem
synthesis of, 467, 468
Germanium
as absorbent, 88
binary systems of, 228
crystal dislocations in, 415
oxide systems of, 233
sputtering of, 429
substitution reactions and, 183-84
surface properties of, 93

Glass
high temperature and, 468, 470

Glucosammonium ion
dissociation constant of, 254

Glucose
mutarotation of, 6
radiolysis of, 297

Glucoside
optical rotation and, 362

Glutamic acid
dissociation constants, 253
radiolysis of
cysteine and, 304

Glutathione
structure of, 48

Glycerol
ion exchange of, 132

Glycine
radiolysis of, 298
structure of, 47

Glycol
ion exchange of, 132

Gold
on alkali halide, 421
condensation of, 463
ion exchange of, 137
vaporization of, 237
Gold-silver system
critical phenomena and, 276

Graft copolymer
radiation and, 317-19
synthesis of, 103-12
Graphite

- irradiation of, 427
- self diffusion of, 418
- Guanylic acid
- radiolysis of, 299
- H**
- Hafnium**
- binary systems of, 228
- Halide**
- binary metal systems of, 234-35
- color centers in, 412-14
- conductance of, 263-64
- dislocations in, 415-16
- at high temperatures
- thermodynamic properties of, 469
- internuclear distances in, 34-35
- irradiation of, 161
- metal
- structure of, 43-44
- molten, 467
- nuclear resonance of, 448
- nuclear shielding and, 335
- radiolysis of, 302, 304
- ternary systems of, 280-81
- vaporization of, 236-37
- see also Alkali halide; Alkyl halide; and specific halides
- Halobenzene**
- spectra of, 356
- Halogen**
- complexes
- charge transfer and, 368, 369
- dissociation of, 461
- ion exchange of, 130
- Halogenation**
- heat of, 4-5
- isotope effect and, 173
- kinetics of, 60
- radiation and, 302
- Heat**
- of adsorption
- polarizability and, 82
- pressure and, 80
- of biochemical reactions, 6-7
- of combustion
- tabulated values of, 8-18
- of formation
- of hydrogen bonds, 193
- of ion pairs, 255
- of hydration
- of ions, 258-59
- of immersion, 81
- integral
- alloys and, 219-20
- of ion exchange, 129
- of mixing
- of electrolytes, 259
- of neutralization
- of organic acids, 259
- of polymerization
- of fibrin, 207
- of reaction
- calorimetry and, 2-7
- tabulated values of, 8-18
- Heat capacity**
- tabulated values of, 8-18
- Helical structure**
- denaturation and, 208-10
- disulfide bonds and, 212-13
- elastic mechanism and, 194-95
- pH and, 196-97
- polypeptides and, 196-98
- in proteins, 198-200
- random coil transitions and, 192-94
- stability of, 192-95
- Helium**
- adsorption of, 80
- excited states of, 446
- solubility of, 281
- wave functions for, 343
- Hemoglobin**
- electronic spectra of, 361
- x-ray diffraction on, 200
- Heptafluoropropane**
- isotope effect on, 175
- Heterocyclic compound**
- excited states of, 366
- spectra of, 357, 358
- Hexachlorodisilane**
- structure of, 37
- Hexachloroethane**
- structure of, 37
- Hexane**
- decomposition of, 61
- irradiation of, 300, 301
- 2-Hexanone**
- photolysis of, 65
- Hexathionate ion**
- structure of, 45, 46
- Hexene**
- oxidation of, 70
- radiolysis of, 301
- Hexose**
- radiolysis of, 297
- High temperature**
- attainment of, 459-61
- chemistry of, 457-86
- kinetics and, 461-65
- materials
- properties of, 468-70
- measurement of, 458-59
- methods in, 458-61
- structural studies and, 465-67
- syntheses and, 467-68
- Hinokittiol**
- dissociation constant of, 254
- Hoffman elimination**
- isotope effect and, 174
- Hydration**
- acidity and, 177
- of electrolytes
- heat of, 258-59
- of ions, 249-53
- Hydrazine**
- decomposition of, 158-59, 161
- photolysis of, 392
- Hydrazoic acid**
- decomposition of, 156-57
- Hydride**
- at high temperatures
- thermodynamic properties of, 469
- structure of, 43
- wave functions for, 343-44
- see also specific hydrides
- Hydrocarbon**
- adsorption of, 78
- basicities of, 171
- binary mixtures of, 280
- cracking of, 467
- decomposition of, 60
- diamagnetic susceptibility of, 333-34
- electronic spectra of, 356-58
- inert gases and, 281
- ion radicals of
- spin resonance and, 436-37
- methyl radicals on, 62
- oxidation of, 70-71
- proton screening and, 337
- radicals from, 160, 161
- radiolysis of, 291, 301-3, 304-5
- viscosities of, 284
- see also Alkane, Aliphatic compound; Aromatic compound; Olefin; Organic compound; and specific hydrocarbons
- Hydrochloric acid**
- activity coefficients of, 257-58
- ion exchange and, 130-31
- Hydrogen**
- abstraction of, 62-63
- atomic
- spin resonance and, 440
- water radiolysis and, 292-96
- wave equation of, 342
- carbon monoxide and spectroscopy of, 281
- chemisorption of, 83, 84
- collision-induced absorption of, 396-99
- in heterogeneous equilibria, 224-25
- in liquids, 281
- magnetic susceptibility of, 332-33
- nitrogen dioxide and, 64
- nuclear shielding and, 335
- ortho-para conversion of, 85, 87
- irradiated catalysts and, 426-27

- radiolysis and, 295-96
- oxidation of, 70
- proton coupling in, 341
- radiolysis of, 290
- trapped atoms of, 146-48
- triatomic
 - wave functions for, 345
- wave functions for, 343
- Hydrogenation
 - catalysis and, 85
 - heat of, 4-5
- Hydrogen bond
 - denaturation and, 208-10
 - formation of
 - heat of, 193
 - thermodynamics of, 203
 - ion binding and, 204-5
 - isotope effect and, 209
 - nuclear resonance and, 448
- polymerization of protein
 - and, 207
- protein structure and,
 - 193-95
 - tertiary, 203-12
- spectroscopy and, 363
- radiolysis and, 299
- review on, 351
- Hydrogen-bromine system
 - kinetics of, 60
- Hydrogen chloride
 - infrared emission of, 55
 - irradiation of, 299-300
 - spectroscopy on
 - solid state and, 402
- Hydrogen cyanide
 - synthesis of, 467
- Hydrogen fluoride
 - crystal structure of, 402
- Hydrogen halide
 - nuclear shielding and, 335
 - ternary systems of, 280-81
 - see also specific hydrogen halides
- Hydrogen ion
 - electronic spectra and, 358
 - solvation of, 251-52
- Hydrogen peroxide
 - decomposition of, 86, 87
 - by corundum crystals, 416
 - formation of, 158
 - heat of oxidation by, 6
 - from ion exchange, 127
 - pyrolysis of, 56-57
- Hydrohalogenation
 - heat of, 4-5
- Hydrolysis
 - of aspirin, 182-83
 - of electrolytes, 254
 - enzymatic, 6
 - of glutamine, 6
 - heat of, 5, 6
 - of phenyl acetate, 183
 - of phthalamic acid, 182
 - of protein, 206-7
- Hydroperoxide
 - polymerization and, 107-8
- Hydroxide
 - high temperature and, 468
 - vaporization of, 238, 239
- Hydroxylamine
 - radiolysis of, 296
- Hydroxyl ion
 - solvation of, 252
- Hydroxyl radical
 - formation of, 158-59, 461
 - from ozone, 61
 - from water radiolysis, 292
- Hyperconjugation
 - existence of, 353
- Hysteresis
 - adsorption and, 78-79
- I
- Imidazole
 - as catalyst, 183
 - electrophilic substitution of, 173
- Imine
 - nitrogen inversion of, 170
- Imino radical
 - formation of, 155-58
 - wave functions for, 344
- Indicator
 - acid reactions and, 176-77
- Indium
 - binary systems of, 228, 229
- Indium-antimony
 - films of, 93
- Inert gas
 - see Gas, inert
- Infrared
 - spectrometer
 - for high temperatures, 485
 - spectroscopy
 - adsorption and, 91
 - high temperatures and, 485-86
 - on nitrogen radicals, 157
 - on nonelectrolyte solutions, 281-82
 - solvation and, 252
 - see also Vibration-rotation spectroscopy
- Inorganic compound
 - fluorescence spectra of, 385
 - at high temperatures
 - synthesis of, 467-68
 - thermodynamic properties of, 469-70
 - radiation and, 303-4
 - thermodynamic properties of, 8-11
- Insulin
 - hydrogen bonds in, 211
 - oxidized
 - helical structure and, 197-98
 - structure of, 199-200
- Interatomic distance
 - in addition compounds, 41
- Interdiffusion
 - ion exchange and, 132-33
- Interionic potential
 - theory of, 249-50
- Intermolecular interaction
 - spectroscopy and, 396-400
- Internal rotation
 - of ethane, 170
 - of methyl compounds, 39
 - molecular structure and, 36-40
 - solid state and, 404
- Intramolecular interaction
 - spectroscopy and, 400-5
- Iodine
 - complexes of
 - charge transfer and, 368, 369
 - condensation of, 462
 - flash photolysis and, 54-55
 - fluorescence quenching of, 64-65
 - in fluorocarbons, 279
 - ion exchange of, 130
 - radiolysis and, 291
 - spectroscopy on, 282
 - trapped atoms of, 161
- Ion
 - electronic spectra of, 361-62
 - hydration of, 258-59
 - potential between, 249-50
 - quantum mechanical properties of, 342-43
- radicals
 - spin resonance and, 436-37
 - spin resonance and, 443-47
 - sputtering and, 427-29
- Ion exchange
 - catalysis and, 139
 - chemistry of, 123-44
 - chromatography, 135-36, 138-39
 - of complex ions, 130-32
 - focussing, 138-39
 - inorganic exchangers, 124-26
 - liquid exchangers, 139
 - membranes and, 134-35
 - organic exchangers, 126-28
 - heterogeneity of, 128
 - reviews on, 123
 - separations by, 135-39
 - of simple ions, 129-30
 - thermodynamics of, 129-32
- Ionic association
 - organic reactions and, 172

- theory of, 248-49
- Ionic strength**
dissociation constants and, 256
- Ionization**
constant
denaturation and, 210
determination of, 253-54
of gases, 289-90
heat of, 5
helical structure and, 209
polypeptides and, 196-97
protein polymerization and, 207
protein structure and, 201-3, 211
thermodynamic properties and, 8-18
of tyrosyl group, 203-4
- Ion-molecule reaction**
radiation and, 290
- Ion pair**
association theory of, 249
complexes and, 254-55
equilibria and, 255-57
- Iridium**
ion exchange of, 137
- Iron**
binary systems of, 227, 230
ion exchange of, 136, 137
oxidation of, 424
vaporization of, 237
whiskers of, 422
- Isobutane**
internal rotation of, 38, 404
- Isobutylene**
polymerization of, 316-17
- Isocitric acid**
dissociation constants of, 253
- Isoprene**
polymerization of, 317
- Isopropanol**
decomposition of, 87
- Isotherm**
physical adsorption and, 77
- Isotope**
denaturation and, 209
enrichment of
by countercurrent electrophoresis, 264
reaction kinetics and, 172-76
solid diffusion and, 417
- K**
- Kekule structure**
theory and, 352-54
wave functions for, 353-54
- Ketone**
irradiation of, 161
photolysis of, 65
radiolysis of, 302
- spectra of, 358-59
- Kinetics**
acidity function and, 177
biradicals and, 68-69
calorimetry and, 2-4, 6
chain decompositions and, 59-60
of denaturation
of protein, 208-9
of desorption, 81-82
of diazotization, 180-81
of electrolyte solutions
theory of, 261
energy transfer and, 54-57
excited species and, 64-66
of Friedel-Crafts reaction, 178
of gas reactions, 53-76
of high temperature reactions, 461-65
of hydrolysis, 182-83
ion exchange and, 132-34
isotope effects and, 172-76
molecular decompositions and, 58-59
nuclear resonance and, 446-47
oxidation and, 69-71
radicals and, 57-58, 66-68
of solid state reactions, 422-24
of substitution reactions, 183-84
transfer reactions and, 60-64
unusual rates and, 176
- Knoevenagel synthesis**
ion exchange and, 139
- Knudsen cell**, 463
- Krypton**
adsorption of, 81
solid solutions and, 277
solubility of, 281
- L**
- β -Lactoglobulin**
dissociation of, 206
- Lanthanum**
vaporization of, 237
- Lead**
ion exchange of, 135
Lead tetramethyl
structure of, 44-45
Linear energy transfer
radiation and, 292
- Liquid**
gases in, 281
mixtures of, 278-81
polarity and, 280
ternary, 280-81
nuclear resonance and, 449
organic
radiation and, 299-303
transport properties of, 283-84
- Lithium**
binary systems of, 225-26, 229
halide, 234-35
isotope
enrichment of, 264
oxide systems of, 231
Lithium chloride
ionization of
spectroscopy and, 396
- Lithium fluoride**
color centers and, 413
irradiation of, 426
trimers of, 236
- Lithium hydride**
wave functions for, 343-44
Lithium oxide
structure of, 44
- Luminescence**
electronic spectra and, 364-67
quenching of, 365
- Lysine**
dissociation constants of, 253
insulin structure and, 211
- Lysozyme**
denaturation of, 209
hydrogen bonds in, 212
spectra of, 361
- M**
- Magnesium**
binary systems of, 226, 229
hydroxide
vaporization of, 238, 239
trapped radicals from, 162
- Magnetic property**
of molecules, 331-42
- Magnetic resonance**
adsorption and, 90
fast reactions and, 176
proton position and, 171
rotational isomerism and, 170
see also Electron spin resonance; Nuclear magnetic resonance; and Paramagnetic resonance
- Magnetic shielding**, 447
- Quantum theory and**, 334-37
- Magnetic susceptibility**
of hydrocarbons, 333-34
of hydrogen, 332-33
of methane, 333
trapped radicals and, 146
- Magnetism**
critical point and, 410-11
quantum theory and, 331-42
- Malononitrile**
hyperconjugation and, 353
- Manganese**
binary systems of, 227

- Manganous ion
spin resonance of, 444, 445
- Mannitol
ion exchange of, 132
- Mass spectrograph
high temperatures and, 465
ultraviolet spectroscopy and, 392
- Mass spectrometry
on oxygen, 154
trapped radicals and, 146
vapor composition and, 221
- Matrix isolation
solid state kinetics and, 423
spectroscopy and, 392-95
- Melting point
of refractory solids, 470
- Membrane
ion exchange and, 134-35
- Mercaptan
radicals from, 160
- Mercury
excited states of, 446
ion exchange of, 138
photosensitization by, 64-65
whiskers of, 422
- Mercury dimethyl
decomposition of, 57
irradiation of, 161
- Mercury-thorium system
phase diagrams of, 228-29
- Merocyanine
spectra of, 360
- Metal
alloys
entropy of mixing and, 219
binary systems of, 225-30
halides and, 234-35
chelates
spectra of, 369
condensation of, 462-63
diffusion of, 284
in oxides, 419
evaporation of, 463
halide systems of, 234-35
at high temperatures
thermodynamic properties of, 469
hydrous oxides of
as ion exchangers, 124-25
oxidation of
nucleation and, 420-21
solid state and, 423-24
radiation damage of, 425
solutions of
bonding in, 219
solid, 277
surface films of, 92-94
trace
ion exchange of, 136
vaporization of, 237
- whiskers of, 463
see also Alkali metal; Alkaline earth metal; Alloy; and specific metals
- Metal-gas reaction
kinetics of, 464-65
- Metal hydride
structure of, 43
- Metal ion
hydrolysis of, 254
spin resonance and, 443-47
- Metal-organic complex
spectra of, 369
- Metal oxide
as catalyst, 89
irradiation of, 426
self diffusion of, 419
- Methane
decomposition of, 159-60
magnetic susceptibility of, 333
radiolysis of, 290, 291
vibrational resolution of, 404
wave functions for, 344-45
- Methanol
adsorption of, 80
conductance and, 264
irradiation of, 300
in toluene, 284
- Methionine
radiolysis of, 298
- N-Methylacetamide
conductance and, 263
- Methylallene
internal rotation of, 38
- Methyl cyanide
photolysis of, 66
- Methylene
carbon monoxide and, 56
reactions of, 68-69
- Methylene blue
as dosimeter, 321-22
- Methylene radical
isolation of, 394
- Methyl germane
potential barrier of, 38
- Methyl group
splitting of, 438-39, 441
- Methyl halide
crystal structure of
spectra and, 403
vibrational band intensities of, 399
- Methyl iodide
irradiation of, 161
- Methyl mercaptan
potential barrier of, 38
- Methylmethacrylate
copolymers of, 319
polymerization of, 316
- 2-Methylpentane
oxidation of, 71
- Methyl radical
on hydrocarbons, 62
- from methylene, 69
production of, 58
spin resonance of, 159-60, 441
trapping of, 159-60
wave functions for, 344
- Mica
ion exchange of, 136
synthesis of, 467
- Microscopy
electron
high temperatures and, 467
of surfaces, 92
- Microwave
discharge
on oxygen, 154
high temperatures and, 466-67
spectroscopy
molecular structure and, 34
on nonelectrolytes, 282
solvation and, 252
see also Electron spin resonance; Nuclear magnetic resonance; and Vibration-rotation spectroscopy
- thermometer, 451
- Molar volume
of gas in liquid, 281
- Molecular decomposition
kinetics of, 58-59
- Molecular structure
of addition compounds, 40-42
of ethylene, 32-33
experimental, 31-52
internal rotation and, 36-40, 170
measurement of, 32-36
theory of, 331-45
- Molecular weight
calorimetry and, 6
in vapor systems, 463
- Mole-fraction
entropy of solution and, 281
- Molybdenum
binary systems of, 227, 228
- Montmorillonite
as ion exchanger, 126
- Morphine
ion exchange of, 138
- Mutarotation
calorimetry and, 6
- Myoglobin
structure of, 48, 200
- Myosin
ion binding of, 205
- N
- Naphthalene
electron spin density and, 339

- fluorescence and, 366
 spectra of, 357
 triplet state of, 364, 392, 439-40
- Naphthoquinone
 electronic spectra of, 359
- Neodymium
 ion exchange of, 130
- Neon
 adsorption of, 80
 hydrate, 278
 self diffusion of, 283
 solubility of, 281
- Neopentane
 irradiation of, 301
- Neptunium
 spin of, 445
- Neptunium ion
 spectrum of, 260
- Neutron
 diffraction
 high temperatures and, 467
- Nickel
 as absorbent, 88, 89
 binary systems of, 227
 sputtering of, 429
- Niobium
 binary systems of, 227, 228, 230
 ion exchange of, 137
 oxidation of, 424
- Nitrate
 ion
 activity coefficients and, 257
 properties of, 260
 solvation and, 252
 irradiation of, 303, 426
- Nitric acid
 conductance and, 264
- Nitric oxide
 stability of, 63
- Nitride
 oxidation of, 464
 structure of, 43
- Nitrobenzene
 as Friedel-Crafts solvent, 178
 spectra of, 356
- Nitrobenzene ion
 spectrum of, 439
- Nitrogen
 adsorption of, 78, 81
 atomic
 nitrogen oxides and, 61
 spin resonance and, 440
 chemisorption of, 83, 84
 diffusion of, 283
 oxides of
 atomic nitrogen and, 61
 new, 395
 radiolysis of, 291
 see also specific oxides
 solid
 spectrum of, 151
 transfer reactions of, 61
- trapped atoms of, 148-53
- Nitrogen dioxide
 hydrogen and, 64
 spectra of, 439
- Nitrogen pentoxide
 decomposition of, 55-56
- Nitrogen tetroxide
 decomposition of, 57
- Nitrogen trioxide
 thermodynamic properties of, 55-56
- Nitromethane
 ionic association and, 172
 photolysis of, 393
- Nitro radical
 detection of, 161
 trapping of, 442
- Nitroso radical
 detection of, 161
- Nitrous acid
 existence of, 260
 isomerization of
 solid state and, 423
 photolysis of, 393
 reactions of, 180-81
- Nitrous oxide
 decomposition of, 86
- Nitroxyl radical
 conformation of, 393
- Nitrozoation
 kinetics of, 180-81
- Nonelectrolyte
 ion exchange of, 132
 solutions of, 273-88
 critical phenomena and, 276-77
 liquid mixtures, 278-81
 solid, 277
 solid-gas, 277-78
 theory of, 273-76
- Nonpolar liquid
 properties of, 280
- Nuclear fusion
 high temperatures and, 460
- Nuclear magnetic resonance,
 435, 447-56
 quantum theory and, 340-42
 shielding constants and, 282
 see also Magnetic resonance
- Nuclear spin
 electronic coupling of, 340-42
- Nucleation
 crystal growth and, 420-21
- Nucleic acid
 denaturation of, 6, 7, 299
 electronic structure of, 361
 optical rotation and, 362
 radiolysis of, 299
- Nucleotide
 electronic spectra of, 361
- radiolysis of, 299
- Nylon
 grafting to, 111
 irradiation of, 311
- O
- Olefin
 addition reactions and, 66-67
 as chain inhibitor, 59
 cyclopropane formation and, 56
 from esters
 elimination of, 59
 hydration of, 177
 irradiation of, 315
 radicals
 spin resonance of, 441
 radiolysis of, 302
 saturation of
 solid state and, 423
- Optical pumping, 446-47
- Optical rotation
 electronic structure and, 362
 review on, 350
- Organic compound
 electronic spectra of, 349-88
 ion exchange of, 138
 irradiation of, 299-303
 in aqueous solution, 296-99
 gases, 290
 solids, 304-5
 nuclear resonance of, 447, 448
 radiolabeling of, 290-91
 reactions of, 172-85
 structure of, 170-71
 thermodynamic properties of, 11-18
- Organic ion
 structure of, 170-71
 see also Carbonium ion;
 and specific ions
- Organic radical
 trapping of, 159-61
 see also specific radicals
- Osmium
 binary systems of, 227
- Osmotic coefficient
 electrolyte solution theory and, 247-48, 249
- Osmotic pressure
 polymer structure and, 118
- Ovalbumin
 denaturation of, 210
 radiolysis of, 298
- Overhauser effect, 449-50
- Oxalylhydroxamic acid
 dissociation constants of, 253
- Oxidation
 heat of, 6
 in gaseous state

- kinetics and, 69-71
- of metals
 - kinetics of, 464
 - nucleation and, 420-21
 - in solid state, 423-24
- Oxide
 - at high temperatures
 - thermodynamic properties of, 469
 - hydrous
 - as ion exchangers, 124-25
 - of nitrogen
 - new, 395
 - phase diagrams of, 230-34
 - self diffusion of, 419
 - sintering of, 420
 - vaporization of, 237, 238
 - see also specific oxides
- Oxygen
 - chemisorption of, 83, 84
 - diffusion of
 - in oxides, 419
 - dissociation of, 55, 461
 - excited nitrogen and, 151-52
 - ferrous sulfate radiolysis and, 294-95
 - to ozone, 154-55
 - photosorption of, 83
 - polyethylene irradiation and, 307-8
 - radiolysis of, 290
 - spectrum of
 - electric discharge and, 395
 - transfer reactions of, 61
 - trapped atoms of, 153-55
- Ozone
 - decomposition of, 55
 - from oxygen, 154-55
 - photolysis of, 61, 154
 - spectrum of, 395
- P
- Palladium
 - hydrogen and, 278
 - ion exchange of, 137
 - vaporization of, 237
- Paraffin
 - bond lengths in, 43
- Parahydrogen
 - conversion of, 85, 87
 - irradiated catalysts and, 426-27
 - water radiolysis and, 295-96
- Paramagnetic ion
 - in crystals, 443-46
- Paramagnetic resonance, 435-56
 - on irradiated polymers, 313-14
 - see also Electron spin resonance; and Magnetic resonance
- Paramagnetism
 - methane and, 333
 - quantum theory and, 337-40
- Particle size
 - of adsorbents, 79
- Pentachloroethane
 - decomposition of, 60
- Pentane
 - decomposition of, 64
 - irradiation of
 - adsorption and, 426
- 2-Pentanone
 - photolysis of, 65
- Pepsin
 - denaturation of, 210
 - heat of, 7
- Pepsinogen
 - pepsin and, 206-7
- Peptide
 - electronic spectra of, 361
 - optical rotation and, 362
 - radiolysis of
 - spin resonance and, 304
 - see also Polypeptide; Protein; and specific polypeptides
- Peptide bond
 - heat of hydrolysis of, 6
- Perchlorate
 - ion
 - activity coefficients and, 257
 - solvation and, 252
 - spectroscopy on, 282
- Perinaphthyl radical
 - spin density and, 339, 438
- Permanganate
 - radiolysis of, 296
- Peroxy radical
 - formation of, 158-59
 - water radiolysis and, 294, 295
- Petroleum
 - radicals from, 443
 - radiogenesis of, 301
- pH
 - electronic spectra and, 358
- Phase
 - diagrams, 219-46
 - gas-condensed, 224-25
- Phenanthrene
 - excited states of, 366
- Phenol
 - radiogenesis of, 302
- Phenyl acetate
 - hydrolysis of, 183
- Phosphopyridine nucleotide
 - charge transfer and, 369
 - energy transfer and, 367
 - radiolysis of, 299
- Phosphorescence
 - spectra, 364-67
- Phosphoric acid
 - amido derivatives of
 - spectra of, 355
- dissociation constants of, 253
- redox potentials and, 257
- Phosphorus
 - condensation of, 462
- Photochemistry
 - mechanisms in, 184-85
- Photochromism
 - electronic structure and, 362-63
- Photoconductivity
 - of organic systems, 367
- Photolysis
 - block copolymerization and, 113
 - of diazomethane, 394
 - of hydrazine, 155, 392
 - of hydrazoic acid, 157
 - of nitromethane, 393
 - of ozone, 154
 - polymerization and, 107
- Photosensitization
 - by mercury, 64-65
- Photosorption
 - theory of, 83
- Photosynthesis
 - energy transfer and, 361
 - polyene structure and, 360
- Phthalamic acid
 - hydrolysis of, 182
- Phthalocyanine
 - electronic spectra of, 361
- Physical adsorption, 77-82
- Physical organic chemistry, 169-90
 - definition of, 169
 - equilibrium and, 172-85
 - reactions and, 172-85
 - structure and, 170-71
- Platinum
 - as absorbent, 88-89
 - ion exchange of, 137
- Platinum tetrathionitrosyl
 - structure of, 47
- Plutonium
 - binary systems of, 230
- Point defect
 - crystal structure and, 411-14
- Polarization
 - adsorption and, 82
 - of fluorescence, 357, 365, 366
 - of light
 - adsorption and, 90
- Polar liquid
 - properties of, 280
- Polarography
 - at high temperatures, 470
- Polyacetylene
 - electronic spectra of, 360
- Poly-D, L-alanine
 - helical structure of, 201
- Polyatomic molecule
 - quantum theory and, 344-45
- Polybutadiene

- irradiation of, 315
- Polycaprolactam
 - irradiation of, 311
- Polyene
 - conjugation in, 352-53
 - electronic spectra of, 359-60
- Polyester
 - irradiation of
 - curing and, 319-21
- Polyethylene
 - dosimetry and, 322
 - grafting to, 317, 318
 - hydroperoxides of, 108
 - irradiation of, 305-9
 - crosslinking and, 305-6
 - crystallinity and, 306-7
 - gas evolution and, 308-9
 - oxygen and, 307-8
 - unsaturation and, 308
 - in vacuum, 314
- Polyethylene glycol terephthalate
 - grafting to, 111
- Polyethylene oxide
 - irradiation of, 311
- Poly-L-glutamic acid
 - ionization of, 196, 197
- Polyhexamethylene adipamide
 - grafting to, 111
 - irradiation of, 311
- Polyhydroxy acid
 - dissociation constants of, 254
- Polyketone
 - photolysis of, 107
- Poly-L-lysine
 - ionization of, 196-97
- Polymer
 - degradation of, 313-14
 - irradiation of, 161, 313-14
 - in solution, 314-15
 - living, 116-17
 - milling of, 116
 - purification of, 117-18
 - radiation and, 305-15
 - solutions of, 314-15
 - reinforcement of, 312-13
 - reviews on, 103
 - separation of, 106
 - solution properties of, 118-19
 - ultrasonic waves on, 116
 - see also Copolymer; and specific polymers
- Polymerization
 - of acrylonitrile, 316
 - active centers and, 106-9
 - by capillary stream, 115
 - by chemical methods, 117
 - condensation method of, 110-12
 - emulsion methods and, 115-16
 - of ethylene, 316
 - of fibrin, 7
 - gamma rays and, 108-9
 - heat of, 5, 7
 - ionic mechanisms for, 109-10
 - labile end groups and, 112-16
 - living polymers and, 116-17
 - of methylmethacrylate, 316
 - polyperoxides and, 113
 - of proteins, 207
 - radiation and, 316-20
 - radical attack and, 103-6
 - radical trapping and, 442-43
 - scission initiation and, 116
 - of styrene, 316
 - tertiary amines and, 114
 - ultrasonic waves and, 116
 - of vinyl stearate, 316
 - x-rays and, 290
 - see also Copolymer; Polymer; and specific polymers
- Polymethacrylic acid
 - irradiation of, 315
- Polymethylmethacrylate
 - as dosimeter, 322
 - irradiation of, 313-14
 - radicals from, 442-43
- Polypeptide
 - helix-random coil transitions in, 196-98
 - optical rotation and, 362
 - physical chemistry of, 191-218
 - structure of, 47-48
- Polyperoxide
 - as polymer initiator, 113-14
- Polyphenyl
 - optical anisotropy of, 360
- Poly-L-proline
 - helical structure and, 198
- Polypropylene
 - irradiation of, 309
- Polysaccharide
 - ion exchange of, 138
 - radiolysis of, 297
- Polystyrene
 - bromination of, 107
 - as dosimeter, 321
 - grafting to, 110, 111
 - irradiation of, 315
- Polytetrafluoroethylene
 - irradiation of, 313, 314
- Polythionate
 - structure of, 45-46
- Polyvinyl acetate
 - copolymers of, 319
- Polyvinyl alcohol
 - irradiation of
 - crosslinking and, 310-11
 - in solution, 314-15
- Polyvinyl chloride
 - as dosimeter, 322
 - irradiation of
 - crosslinking and, 310
- Polyvinyl pyrrolidone
 - irradiation of
 - in solution, 314
- Polyne
 - electronic spectra of, 359
- Porphin
 - electronic spectra of, 361
- Porphyrin
 - electronic spectra of, 360-61
 - radiolysis of, 298-99
 - spin resonance of, 445
- Potassium
 - halide systems of, 234, 235
 - ion exchange of, 129, 136
- Potassium chloride
 - color centers and, 413, 414
- Potential barrier
 - determination of, 37-38
- Praseodymium
 - oxide systems of, 232
- Prednisone acetate
 - photochemical products of, 184
- Pressure
 - absorption coefficients and, 398-99
 - dissociation
 - tabulated values of, 8-18
 - gas diffusion and, 283
 - organic reactions and, 177-78
 - point defects and, 414
 - spectra of liquids and, 281
 - on viscosity
 - of hydrocarbons, 284
- Propane
 - nuclear resonance of, 447
 - radiolysis of, 291
- Propargyl chloride
 - structure of, 36
- Propionamide
 - irradiation of, 161
- Propyl chloride
 - structure of, 37
- Propylene
 - internal rotation of, 38
 - oxidation of, 70
- Propylene oxide
 - rotation barrier of, 404
- Propyl radical
 - hydrogen abstraction by, 63
 - source of, 67
- Protactinium
 - ion exchange of, 137
- Protein
 - associations between, 207
 - configurational expansion of, 206
 - crystallography of, 48
 - denaturation of, 208-10
 - electronic spectra of, 361

excited states of, 366
 fibrous
 elastic properties of, 194-95, 198-99
 interactions of
 calorimetry and, 6, 7
 ion binding of, 204-6
 ion exchange of, 138
 optical rotation and, 362
 physical chemistry of, 191-218
 radiolysis of, 298
 structure of
 primary, 192
 secondary, 192-200
 tertiary, 201-13
 titration of, 201-3
 see also Polypeptide; and specific proteins
 Proteolysis
 protein structure and, 206-7
 Proton
 gyromagnetic ratio, 449
 magnetic shielding and, 334-37
 spin coupling of, 340-42
 transfer reactions
 nuclear resonance and, 447-48
 Purine
 electronic structure of, 361
 spectra of, 358
 Pyrazine
 spectra of, 358
 Pyrene ion
 spin resonance of, 436
 Pyridine
 ion exchange of, 138
 structure of, 35-36, 358
 Pyridine nucleotide
 energy transfer and, 367, 369
 radiolysis of, 299
 Pyrimidine
 electronic structure of, 361
 Pyroceram
 synthesis of, 468
 Pyrometry
 high temperatures and, 458
 Pyrrole
 spectra of, 355

Q

Quantum theory, 331-48
 electron spin resonance and, 337-40
 magnetism and, 331-42
 Quartz
 synthesis of, 468
 Quenching
 of fluorescence, 365
 of luminescence, 365

Quinol clathrate
 solid-gas theory and, 277-78
 Quinoline
 dissociation constants of, 254
 quenching of, 366
 Quinone
 spectra of, 358-59

R

Radial distribution function
 of electrolyte solutions, 251
 nonelectrolyte solutions and, 273-74
 Radiation
 chemistry of, 289-330
 dosimetry and, 321-22
 gases and, 289-91
 inorganic compounds and, 303-4
 organic compounds and, 296-303, 304-5
 polymerization and, 316-21
 polymers and, 305-15
 protection from
 anthracene and, 321
 benzene ring and, 312
 reviews on, 289
 solid state and, 424-29
 temperature measurement and, 458, 459
 water and, 292-99
 Radical
 addition of, 66-68
 alkyl, 58, 67, 340
 aromatic
 in solution, 435-39
 block copolymerization and, 112-16
 in condensed phases, 276
 decomposition of, 66-68
 diatomic
 wave functions for, 344
 electronic spectra of, 361-62
 formation of
 high temperature and, 467-68
 gas kinetics and, 57-58, 66-69
 graft polymerization and, 103-6
 hyperconjugation and, 353
 ions
 spin resonance and, 171
 organic
 trapping of, 159-61
 polyatomic
 wave functions for, 344-45
 from polymer scission, 116
 spin resonance and, 435-43

trapped, 440-43
 energetic, 145-68
 spin resonance and, 440-43
 triplet state and, 439-40
 from water radiolysis, 292-95
 yields of, 300
 see also Alkyl radical; Aromatic radical; and specific radicals
 Radioisotope
 ion exchange of, 125
 Radiolysis
 of gases, 290-91
 of inorganic compounds and, 303-4
 organic compounds and, 296-303, 304-5
 of polyethylene, 305-9
 polymers and, 305-15
 of water, 292-96
 organic compounds and, 296-99
 Raman spectra
 at high temperatures, 466
 Random coil
 helical structure and, 192-94
 Rare earth ion
 paramagnetic resonance of, 444, 445
 Reaction calorimetry, 2-7
 Reaction rate
 calorimetry and, 2-4, 6
 see also Kinetics
 Relaxation spectrometry
 on ionic solutions, 265-66
 Resin
 for ion exchange, 126-28
 Resonance
 conjugated systems and, 352-54
 see also Electron spin resonance; Nuclear magnetic resonance; and Paramagnetic resonance
 Rhodium
 ion exchange of, 137
 Rhodopsin
 excited states of, 366
 Ribonuclease
 denaturation of, 209
 hydrogen bonds in, 211
 oxidized
 helical structure and, 197, 198
 x-ray diffraction on, 200
 Ribonucleic acid
 of tobacco mosaic virus
 spectra of, 361
 Rotation
 spectroscopy, 389-408
 see also Internal rotation; and Optical rotation
 Rotational barrier
 organic structure and, 170

- Rubber
 copolymers of, 318-19
 grafting to, 105, 108
 irradiation of, 312
 thermal shrinkage of, 199
- Rubidium
 halide systems of, 234
 ion exchange of, 125
 spectroscopy on, 261
- Ruthenium
 ion exchange of, 132, 137
- S
- Salicylic acid
 radiolysis of, 297
- Salt
 molten
 equilibria and, 470
- Salt bridge
 diffusion potential of, 265
- Scandium
 ion exchange of, 137
- Scavenger
 radical yields and, 300
- Selenious acid
 existence of, 260
- Selenium
 binary systems of, 229
 vaporization of, 237
- Self diffusion
 ion exchange and, 133-34
 see also Diffusion
- Semiconductor
 catalysis and, 86
 Faraday effect and, 414
 nuclear resonance and, 448
 phase diagrams of, 229
 point defects and, 414
- Semiquinone
 electron spin resonance and, 340, 437
- Semiquinone radical
 spectra of, 439
- Shock wave
 decomposition kinetics and, 60
 high temperatures and, 460
- Silane
 vibrational resolution of, 404
- Silica
 surface structure of, 91
- Silica alumina
 as catalyst, 89
- Silicate rock
 ion exchange of, 136
- Silicic acid
 dissociation constant of, 253
- Silicon
 as absorbent, 88
 binary systems of, 228, 229
 carbide of
 vapors of, 237
 crystal dislocations in, 415
 oxidation of, 423
 oxide systems of, 233, 234
- Silver
 binary systems of, 228, 229
 condensation of, 463
 films of, 94
 ion exchange of, 137
 sputtering of, 428-29
 vaporization of, 237
- Silver bromide
 self diffusion of, 418-19
- Silver-cadmium alloy
 vapor pressure and, 223
- Silver chloride
 activity of, 220-21
- Silver-copper system
 vapor pressure and, 222
- Silver-gold alloy
 thermodynamic properties of, 223
- Silver nitrate
 dissociation constant of, 263
 irradiation of, 303
- Silver perchlorate
 conductance of, 264
- Silver phosphate
 as dosimeter, 321
- Sintering
 diffusion and, 420
- Sodium
 excited states of, 446
 flames, 461
 halide systems of, 234, 235
 isotopes of
 ion exchange of, 135
 in liquid ammonia
 spin echo and, 439
 resonance radiation of, 55
 self diffusion of, 133-34
 spectroscopy on, 282
 trapped radicals from, 162
- Sodium chloride
 activity coefficients of, 258
 color centers and, 414
 self diffusion of, 418
- Sodium fluoride
 spin resonance and, 445
- Sodium sulfate
 temperature and, 260
- Solid
 and gas system
 interactions of, 87-96
 reaction rates of, 462-65
 theory of, 277-78
- Inorganic
 radiation and, 303-4
 nuclear resonance and, 449
- Organic
 radiation and, 304-5
- radiation effects in, 424-29
 solutions of, 277
 transport properties of, 283-84
 see also Solid state
- Solid state
 chemistry of, 409-34
 crystal growth and, 420-22
 defects and, 411-16
 diffusion and, 416-20
 kinetics of, 422-24
 radiation effects and, 424-29
 vibrational intensities and, 402-5
- Solubility
 dissociation constant and, 177
 gas in liquid, 281
 high temperature and, 468
 ternary systems and, 280-81
- Solution
 aqueous
 radiation and, 292-99
 of electrolytes, 247-72
 of fluorocarbons, 279
 of liquid mixtures, 278-81
 of nonelectrolytes, 273-88
 of polymers
 radiation and, 314-15
 solid, 277
 solid-gas, 277-78
- Solvation
 of electrolytes, 250-53
 numbers
 determination of, 251
 on spectra, 363
- Solvolyis
 ion pairs and, 172
- Sorbitol
 ion exchange of, 132
- Sound velocity
 internal rotation and, 39-40
 see also Ultrasound
- Spectra
 charge-transfer, 367-69
 electronic
 of organic molecules, 349-88
 nomenclature and, 354-55
 reviews on, 349-51
 theory of, 351-55
 see also Electronic spectra; Electron spin resonance; Emission spectra; Fluorescence; Infrared; Nuclear magnetic resonance; Paramagnetic resonance; Raman spectra; Ultraviolet; and Spectroscopy
- Spectrometer
 for magnetic resonance,

- 446
mass
for high temperatures, 465
ultraviolet monochromator and, 392
- Spectrophotometry
of biological materials, 361
dissociation constants and, 253
- Spectroscopy
adsorption and, 90-91
Childe Harold and, 395
excited molecules and, 391-96
high temperatures and, 465-67
interacting systems and, 396-405
ion pair differentiation and, 254-55
matrix isolation and, 392-95
on nitrogen radicals, 156, 157
on nonelectrolyte solutions, 281-82
on oxygen atoms, 154
on proteins
hydrogen bonding and, 211-12
reviews on, 351
solvent effects and, 363
trapped radicals and, 146
vibration-rotation, 389-408
see also Electronic spectra; Electron spin resonance; Fluorescence; Infrared; Nuclear magnetic resonance; Paramagnetic resonance; Phosphorescence; Raman spectra; Spectra; Vibration-rotation spectroscopy; and Ultraviolet
- Spin-echo
sodium-ammonia system and, 439
solids and, 449
- Spin resonance
see Electron spin resonance; and Paramagnetic resonance
- Spin-spin interaction, 447
- Spin wave
in films, 409
- Sputtering
of solid surfaces, 427-29
- Stability constant
of electrolytes, 256-57
- Stannic chloride
as catalyst, 179-80
- Statistical mechanics
of electrolyte solutions, 247-50
- Steroid
electronic spectra of, 361
fluorescence of, 366
nuclear resonance of, 447
- Stilbene
fluorescence of, 366
- Strontium
ion exchange of, 125, 129
self diffusion of, 134
- Styrene
grafting of, 317, 318, 319
polymerization of, 108, 316
spectra of, 362
- Sublimation
heat of
tabulated values of, 8-18
- Substitution reaction
noncarbon atoms and, 183-84
- Sucrose
conductance and, 262-63
- Sudan III
dosimetry and, 322
- Sulfide
at high temperatures
thermodynamic properties of, 469
oxidation of, 464
reduction of, 224-25
spectra of, 355
- Sulfonic acid resin
stability of, 128
- Sulfur
alloys of, 225
orthorhombic
structure of, 46
substitution reactions and, 183-84
trapped radicals from, 162
- Sulfur dioxide
spectroscopy on, 282
- Sulfur halide
structure of, 45-46
- Sulfuric acid
irradiation of, 300
- Sulfur monochloride
structure of, 37
- Sulfur-nitrogen compound
structure of, 46-47
- Sulfurous acid
existence of, 260
- Superconductivity
theory of, 409
- Super oxide
formation of, 158
- Surface
of adsorbents
measurement of, 79
cleaning of, 92
diffusion and, 92
energy
formula for, 92
layer
properties of, 92-94
magnetic resonance and, 90
- properties of, 77-102
sputtering and, 427-29
- Surface tension
calculation of, 92
conductance and, 262
at high temperatures, 470
- Synthesis
Friedel-Crafts reaction and, 178-80
at high temperatures, 467-68
- T
- Tantalum
binary systems of, 228
oxidation of, 423
- Tarnishing
solid state and, 423-24
- Technetium
spin of, 445
- Teflon
irradiation of, 313, 314
- Tellurium
binary systems of, 228, 229
ion exchange of, 132
vaporization of, 237
vapor pressure of, 223-24
- Temperature
consolute
see Critical phenomena
high
chemistry of, 457-86
measurement of, 458-59
- Ternary system
diffusion and, 282
liquid, 280-81
- Tetrabutylammonium tetraphenylboride
conductance of, 264
- Tetraethylammonium picrate
conductance of, 263
- Thallium
ion exchange of, 131
- Thermochemistry, 1-30
literature on, 1-2
tabular summaries for, 8-18
- Thermocouple
for high temperatures, 458
- Thermodynamic property
of electrolyte solutions, 257-59
of gas in liquids, 281
of high temperature materials, 468-70
of inorganic compounds, 8-11
literature on, 1-2
of multicomponent systems, 219-20
of organic compounds, 11-18

- of solid solutions, 277
 - Thermodynamics
 - of ceramic melts, 233-34
 - of denaturation
 - of nucleic acid, 6, 7
 - of protein, 209-10
 - of gas-condensed phase reactions, 224-25
 - heterogeneous equilibria and, 219-39
 - hydrogen-bond formation and, 203
 - ion exchange and, 129-32
 - of protein associations, 207
 - transport properties and, 282
 - Thermoelectric power of ionic crystals, 412
 - Thermogenesis of organisms, 7
 - Thermometry
 - high temperatures and, 458, 459
 - Thiocyanate group
 - structure of, 46
 - Thiophene
 - spectra of, 355
 - Thorium
 - binary systems of, 228, 229, 230
 - ion exchange of, 137
 - Thrombin
 - fibrinogen splitting and, 206
 - Thulium
 - vaporization of, 237
 - Tin
 - binary systems of, 228, 229
 - surface films of, 93, 94
 - whiskers of, 422
 - Titanium
 - binary systems of, 227
 - ion exchange of, 130, 137
 - oxidation of, 424
 - oxides of, 232
 - Titration
 - dissociation constants and, 253
 - of proteins, 201-3
 - hydrogen bonding and, 211
 - Tobacco mosaic virus
 - spectra of, 361
 - Toluene
 - emission spectra of, 366
 - ion
 - spin resonance of, 437
 - irradiation of, 161
 - isotope effect on, 175
 - phosphorescence of, 364
 - Toluidine
 - evaporation of, 463
 - Transference number
 - apparatus for, 264
 - by centrifugal field, 257
 - electrophoresis and, 264
 - Transfer reaction
 - gas kinetics and, 60-64
 - Transition
 - heat of
 - tabulated values of, 8-18
 - of polypeptide chains, 192-95
 - Transition metal
 - binary systems of, 227
 - see also specific metals
 - Transpiration, 463
 - Transport property
 - at high temperatures, 469
 - nonelectrolyte solutions and, 282-84
 - Triarylgemyl halide
 - solvolysis of, 184
 - Triarylmethane
 - by Friedel-Crafts reaction, 179
 - Trichloroacetic acid
 - nuclear resonance of, 448
 - Triethylamine
 - oxidation of, 70
 - Trimethylamine
 - internal rotation of, 38
 - oxidation of, 70
 - rotation barrier of, 404
 - Trimethylindium
 - structure of, 45
 - Trimethylphosphine
 - internal rotation of, 38
 - rotation barrier of, 404
 - Tripeptide
 - structure of, 47-48
 - Triphenylmethyl
 - nucleophilic reactions of, 172
 - spin resonance of, 437, 438
 - Triplet state
 - of anthracene, 366
 - electronic spectra and, 364-67
 - of naphthalene, 364, 392, 439-40
 - review on, 350
 - spin resonance and, 439-40
 - Tritium
 - as labeling agent, 280-91
 - Tropolone
 - dissociation constant of, 254
 - Tropylium ion
 - structure of, 171
 - Trypsin
 - denaturation of, 210
 - heat of interaction of, 7
 - radiolysis of, 298
 - Tryptophan
 - luminescence of, 366
 - Tungsten
 - as absorbent, 88
 - binary systems of, 227, 228
 - Tyrosinase
 - radiolysis of, 298
 - Tyrosine
 - electronic structure of, 361
 - protein structure and, 203-4
- U
- Ultrasound
 - crystal excitation of, 409-10
 - electrolyte solutions and, 265-66
 - high temperature and, 459
 - polymerization and, 116
 - ring cleavage and, 178
 - rotational isomerism and, 170
 - solid diffusion and, 417
 - solvation and, 252
 - vibration potentials and, 266
 - Ultraviolet
 - for mass spectrometer and, 392
 - polymerization and, 109, 115
 - spectroscopy
 - hydrogen bonds and, 211-12
 - on ions, 362
 - on radicals, 362
 - vacuum, 355
 - Unsaturation
 - of polyesters
 - radiation and, 320-21
 - in polyethylene
 - radiation and, 308
 - Uracil
 - spectra of, 361
 - Uranium
 - binary systems of, 227, 229-30
 - ion exchange of, 131, 132, 135, 136-37
 - oxide
 - activities of, 221
 - vapor pressure and, 222
- V
- Valence
 - theory of, 331-45
 - Valeraldehyde
 - photolysis of, 65
 - Vanadium
 - binary systems of, 227, 228
 - ion exchange of, 137
 - Vaporization
 - heat of
 - tabulated values of, 8-18
 - heterogeneous equilibria and, 235-39
 - Vapor pressure

heterogeneous equilibria
and, 221-24
of hydrogen isotopes, 280
tabulated values of, 8-18
Vibration-rotation spectroscopy, 389-408
Vinyl acetate
branched polymers of, 111-12
Vinyl fluoride
bond distance in, 33
Vinylidene chloride
structure of, 44
Viscosity
of electrolyte solutions, 264-66
of gases, 283
at high temperatures, 470
of nonelectrolyte solutions, 283-84
polymer structure and, 118
pressure and, 284
Vitamin B₁₂
structure of, 48
Vitamin D
spectra of, 361
Volume
partial molar
gas in liquid, 281
Vulcanization
radiation and, 312

W

Water
adsorption of, 78, 80, 81, 92
spectroscopy and, 91
chemisorption of, 84
decomposition of, 60, 159
density of

adsorption and, 92
dissociation of
constant of, 259
sound absorption and, 265
electrolyte solvation and, 250-53
formation of
radiation and, 296
high temperature chemistry and, 468, 469
of hydrated crystals
nuclear resonance and, 448
radiolysis of, 290, 292-96
organic compounds and, 296-99
vibrational frequency of, 260
vibrational resolution of, 404
Wave function
for atoms, 342-43
for conjugated systems, 353-54
for diatomic molecules, 343-44
for polyatomic molecules, 344-45
for saturated compounds, 352
Whisker
crystal growth and, 421-22
growth of, 463

X

Xenon
adsorption of, 78, 81
self diffusion of, 283
solid solutions and, 277

solubility of, 281
X-ray
crystallography
nitrogen radicals and, 157
diffraction
high temperatures and, 467
protein structure and, 200
trapped radicals and, 146
polymerization and, 290
Xylene ion
spin resonance of, 437

Y

Yttrium
ion exchange of, 125

Z

Zeolite
as ion exchanger, 126
Zinc
binary systems of, 228, 229
films of, 94
ion exchange of, 131, 137-38, 139
oxide systems of, 231-32
whiskers of, 421
Zirconium
binary systems of, 228, 229
halide systems of, 234, 235
ion exchange of, 131, 137
oxide systems of, 232
Zymogen
activation of, 206-7